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# Indian Journal of Economics

ORGAN OF THE INDIAN ECONOMIC ASSOCIATION

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**JULY 1931**

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DEPARTMENT OF ECONOMICS AND COMMERCE, UNIVERSITY OF ALLAHABAD,  
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AT THE

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# Indian Journal of Economics

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VOL. XII

JULY 1931

PART I

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## A FURTHER ANALYSIS OF THE STATISTICS OF TRADE UNIONISM AND TRADE DISPUTES

BY

K. B. MADHAVA, M.A. AND V. N. POORNAPREGNA, M.A.,  
*Mysore.*

This paper generally brings up-to-date the information collected in two earlier papers<sup>1</sup> by one of us, and examines the data so collected with a view to find to what extent the conclusions arrived at in the previous papers are corroborated, or contradicted, besides

<sup>1</sup> K. B. Madhava : "Trade Unionism," Indian Journal of Economics, Vol. VII, pp. 227—249 (referred to frequently in this paper as first paper).

K. B. Madhava : "Analysis of Trade Disputes," Ibid., pp. 250—276 (referred to frequently in this paper as the second paper).

including also certain aspects of labour statistics not previously dealt with.

## PART A

### I. Extent of Trade Unionism.

The extent to which labour organisations had spread during the war and immediately after it as revealed by an inquiry specially conducted by the International Labour Office was given in Table I of the first paper. Since then The International Federation of Trade Unions has been publishing their Year Books setting forth various particulars.<sup>2</sup> It is found that there has been a continuous and considerable decline in membership since 1921, the economic crisis in 1923 and later years believed to be contributing to it to a large extent. About 1925 the Trade Union membership all over the world stood at 36.4 millions, which itself was a decline of about 11 per cent over the previous year's estimate. The extent to which 19 countries (for which full particulars are available) have been affected by this phenomenon may be exhibited by the ranks they occupy at the dates 1920 and 1928.

Germany and Great Britain retained in 1928 their original ranks respectively of the first and the second places.

Besides these, Belgium, Bulgaria, Canada, Hungary and Netherlands also retained their original ranks.

Czechoslovakia, Denmark, France, Greece, Rumania and South Africa shifted their places by one.

Sweden, Switzerland and Austria improved their ranks considerably at the expense of Spain, Netherlands, and Argentine, the last of which suffered by no fewer than seven places.

<sup>2</sup> Extracts here given are from the Year Books for 1924 and 1928.

Also the proportion of organised workers in each country to the total population therein is given in the following table (though involving the additional factor of the state of industrialization in each country) which is also interesting, revealing as it does that in Germany and Britain the movement has made considerable progress, whereas in Japan, and India, it is still in its initial stage.

TABLE I

Country	Organised workers per 1000 total population
Germany ... ..	153
Britain ... ..	133
Belgium ... ..	99
Italy .. ...	51
France ... ..	36
Canada ... ..	29
Japan ... ..	2
India ... ..	1

## II. The Composition of Trade Unions.

Against the statistics of England and Germany given in the first paper we reproduce this time the statistics of England and Australia from which it will be seen that the distribution of membership generally follows the course of industrial occupations in the country.

**TABLE II**  
*Trade Union Membership in England and Austria*

INDUSTRY.	ENGLAND : 1928 <sup>3</sup>			AUSTRIA : 1926 <sup>4</sup>	
	Membership in thousands	Percentage to total in 1928	Percentage to total in 1921	Membership in thousands	Percentage to total in 1926
1. Mining and quarrying	557	14·6	13·8	46	5·4
2. Metals, etc. ...	598	15·7	15·4	79	9·3
3. Clothing, etc. ..	139	3·7	4·6	48	5·6
4. Paper and printing ...	118	3·1	3·1	19	2·3
5. Building ... ..	306	8·0	6·2	45	6·4
6. Transport ... ..	533	14·0	15·4	176	20·7
7. Textiles .. ..	235	6·1	9·2	...	...
8. Other manufactures ...	...	...	...	147	17·3
9. Domestic servants and Hotels ... ..	...	...	..	26	3·0
10. Pastoral and agriculture	...	...	...	54	6·4
11. Others .. ..	1,323	34·8	32·3	202	23·6
Total ... ..	3,809	100·0	100·0	851	100·0

In view of the remark made in I regarding the general decline in membership at the present time, the percentage composition in each industry in 1921, dealt with in the first paper is now given in column 4 of the above table.

It will be seen that all industries are equally affected, as no serious disturbance has taken place in the distribution in general, the only significant departure being two-and-a-half points decline in textiles at the present date made up by the transfer to an equal extent into the group 'others.'

<sup>3</sup> Bombay Labour Gazette : (abbreviated throughout B.L.G.).

<sup>4</sup> Commonwealth Year Book, 1927, p. 553.

In regard to India, or rather to Bombay Presidency, the distributions according to the latest information now available, and the latest as at the first paper, are given in Table III.<sup>5</sup>

TABLE III  
*The Number of Trade Unions and Their Strength in  
Bombay Presidency*

INDUSTRY	QUARTER ENDED 30TH JUNE, 1926		QUARTER ENDED 30TH MARCH, 1930		PERCENT-AGE TO 1926	TOTAL 1930
	Unions	Member-ship	Unions	Member-ship		
1. Posts and Telegraphs	26	6,212	32	9,157	9'6	6'3
2. Textile ...	12	24,545	12	24,272	38'0	16'8
3. Railways and Tramways,	7	17,481	19	63,348	27'1	43'9
4. Sea Men ...	2	14,497	3	29,834	22'4	20'7
5. Port Trust ...	...	...	5	6,002	...	4'2
6. Engineering ...	2	874	1	499	1'4	0'3
7. Government Offices' clerks, peons, etc.	2	637	14	7,388	1'0	5'1
8. Miscellaneous ...	2	326	8	3,909	0'5	2'7
Total ...	53	64,572	94	1,44,409	100'0	100'0

It will be noticed from this table that the total membership increased by 124 per cent, this being shared very evenly among the several industries. The two important groups of Unions also tell different tales. Railwaymen membership has increased by 262 per cent, thereby seizing for itself the largest share (43·9 per cent) in the trade union membership now, from the Textile Industry which held that place in 1926 (with 38 per cent). This industry, generally speaking, has suffered badly (even as in Eng-

<sup>5</sup> The statistics relating to Tables III to VI have been compiled from the first paper, and also B.L.G., May 1930, pp. 902 and also 928—952.



land) by keeping both the number of Unions and their total strength nearly the same as in 1926, and having thus failed to share in the general increase. Not that it did not have any happenings in the interval; in December 1928 its membership vastly increased, mainly through the activities of the now famous Girni Kamgar Union, and again at the present date it has come down as rapidly on that Union failing to function.

Another feature, though not so sensational, is the large increase in numbers as well as in proportions, in membership among "Government Offices' clerks' and peons' " Unions.

### III. Concentration of Membership.

The variation in membership may now be examined according to its concentration in Unions of certain sizes. Table IV gives comparatively the relevant statistics at the present date and as at the time of the first paper (omitting the Indian Seamen's Union in both the cases for the reasons stated in the first paper).

TABLE IV  
*Concentration of Membership*

SIZE OF UNION	30TH JUNE, 1926			31ST MARCH, 1930		
	Number of Unions	Total Membership	Percentage to total	Number of Unions	Total Membership	Percentage to total
Under 50 ...	4	151	0·3	3	113	0·1
50—100	6	460	0·9	4	265	0·2
100—200	7	1,012	1·9	19	261	2·1
200—300	10	2,435	4·6	15	3,637	3·0
300—500	6	2,327	4·4	14	5,760	4·7
500—1000	3	1,742	3·3	19	13,803	11·4
1000—2000	5	7,582	14·2	7	8,961	7·4
2000—5000	6	16,197	30·4	3	7,125	5·9
5000 and Over	3	21,260	40·0	6	79,109	65·2
(Not reported)	(2)	...	...	(3)	...	...
Total ...	50	53,166	100·0	90	1,21,837	100·0

Two points emerge rather conspicuously from this table. First is the significant increase in the group of size 500 to 1,000 members, but this is owing to the formation, within the interval, of no fewer than 12 among the 19 Unions now enumerated under this group. The second feature is the phenomenal increase in the last group—Unions of over 5,000 membership and this however can be traced to a different, and probably more satisfactory causes, viz., the normal growth of old Unions formed prior to 1921; this feature therefore also accounts for the migration of a proportionately large share from the group just smaller in size, viz., of 2000—5000 membership.

#### IV. Financial.

TABLE V  
*Rates of Monthly Subscription*

Rate of monthly subscription	No. of Unions	
	30th June, 1926	31st March, 1930
1 anna ... ..	0	2
2 annas ... ..	2	6
4 annas ... ..	22	88
8 annas ... ..	1	14
2 to 8 annas (varying according to status of member) ... ..	23	22
Special ... ..	5	10
Not given ... ..	...	2
	55	94

From Table V giving the frequency distribution of the rates of subscription, it would appear that 8 annas subscription rate has now become popular, while, keeping at the same time, the 4 annas rate as frequently as before (in about 40 per cent of the Unions).

It is worthy of notice that while membership has increased by 124 per cent the receipts and expenses of the Unions have both

increased by about 192 per cent. Details in this connection are usually furnished in foreign reports of Trade Unions in regard to sources of income, and the channels of expenditure. Thus, for instance, from the report of the Chief Registrar of Friendly<sup>6</sup> Societies for 1928 we find that £9.9 million were collected by 567 Unions out of which £7.2 million were collected from members, and £2.1 million came from Government (towards unemployment insurance and administration for expenses), the balance being from other sources. Of this £8.8 million were expended, the largest share, £5.5 million being given away in various unemployment, sickness, accident, funeral, superannuation, migration and dispute benefits; and £3.3 million being spent on management and other expenses. Such a statement showing the utilisation of funds of the Indian Unions would have been extremely interesting, and in its absence we content ourselves by compiling the available data as in the following table which may be compared with the tables given in the first paper to ascertain the extent to which ranges of receipts and expenditure have altered in the interval.

TABLE VI

*Receipts and Expenditure as at 31st March, 1930*

Range of amounts	Receipts		Expenditure	
	No. of Unions	Total amount	Number of Unions	Total amount
		Rs.		Rs.
Not reported ..	16	...	19	...
Less than Rs. 10	5	300	10	61
Rs. 10 and Rs. 50	22	623	20	632
Rs. 50 and Rs. 100	12	847	11	708
Rs. 100 and Rs. 200	15	2,084	10	1,415
Rs. 200 and Rs. 500	7	1,886	9	3,151
Rs. 500 and Rs. 1,000	7	14,596	4	2,579
Over Rs. 1000	...	17,675	11	16,879
Total	49	37,741	94	25,425

<sup>6</sup> From the details furnished in the B.L.G., June 1930, p. 1020.

## V. Growth of Membership.

Under normal circumstances the factors influencing membership and the activities of Trade Unions were stated in the first paper to be "political, economic and social," and the variation in actual recorded Membership in Trade Unions in Bombay Presidency was there studied quarter by quarter from June 1922 to June 1926 to determine if there was any simple law that would aptly describe the growth. It was found that membership showed a secular increase and not merely that, but that the increase had also an accelerative tendency. In fact a second degree parabolic curve, having a high degree of fit was calculated and the values expected by that formula were also stated on page 242 of the first paper. It is of course very difficult to use such formulæ for prognosticating purposes, for in the future several factors not taken into recognition may suddenly crop up and disturb. Such things did happen more than once during the period that has now passed. An unprecedented expansion among the organisation of textile workers in Bombay City did take place which accounted for an abnormal increase of 69·29 per cent during the fourth quarter 1928, sending up the total membership of about 117 thousand in September 1928 to round about 198 thousand in December 1928. One particular Union, viz., The Bombay Girni Kamgar Union, which played a prominent part in the labour unrest during October 1928 shot up its strength from 324 to 54,000 and 65,000. Soon enough by the first quarter of 1930 there was a large fall due according to official reports to "an unprecedented fall in the membership of the Girni Kamgar Union from 54,000 to 800, immediately following the unsuccessful termination of the general strike of 1929 in the Bombay Textile Mill industry and the subsequent withdrawal of Bombay Mill Owners' Association of their recognition of the Union; and all round decrease in the membership of the other textile labour unions in Bombay City

except the Bombay Mill Workers' Union, also due to the failure of 1929 strike."<sup>7</sup>

Besides these there was another abrupt rise contributing for an increase of over 16 per cent during March—June, 1928. In these circumstances the nominal continuation of the formula already obtained for testing each individual value would be subject to severe strain. But in view of the partial adjustments that took place during the first quarter of 1930, the latest figure available is yet in conformity with the value that may be obtained by an algebraic extrapolation in the last formula, viz., against 153,541 expected, the actual membership is 144,499 at the end of March 1930; this involves an error under 6 per cent and lies within the limits of variation assigned for that formula. As, however, the growth up to December 1927 was normal, the opportunity of the additional figures available from June 1926 was availed of to revise the equation of the curve of fit. This was also a parabola of the second degree, its equation being

$$\text{Membership} = 50,979 + 1524 t + 173 t^2$$

where  $t$  represents the interval in quarters of an year from March 1925.

Table VII reproduces the recorded membership together with those resulting out of the two formulæ. The standard error of estimate of the present formula is 3049 against 3040 of the previous formula and the departure at the latest date for which statistics are now available is a deficit of 6,240 in membership which is only 4.14 per cent. The outstanding conclusion of all this is that in spite of these phenomenal disturbances in the interval, one way as well as the other, the growth in membership retains its constitution in conformity with the original law associated with it (see Fig. 1).

<sup>7</sup> B.L.G., May 1930, p. 101.

Diagram I: Table VII

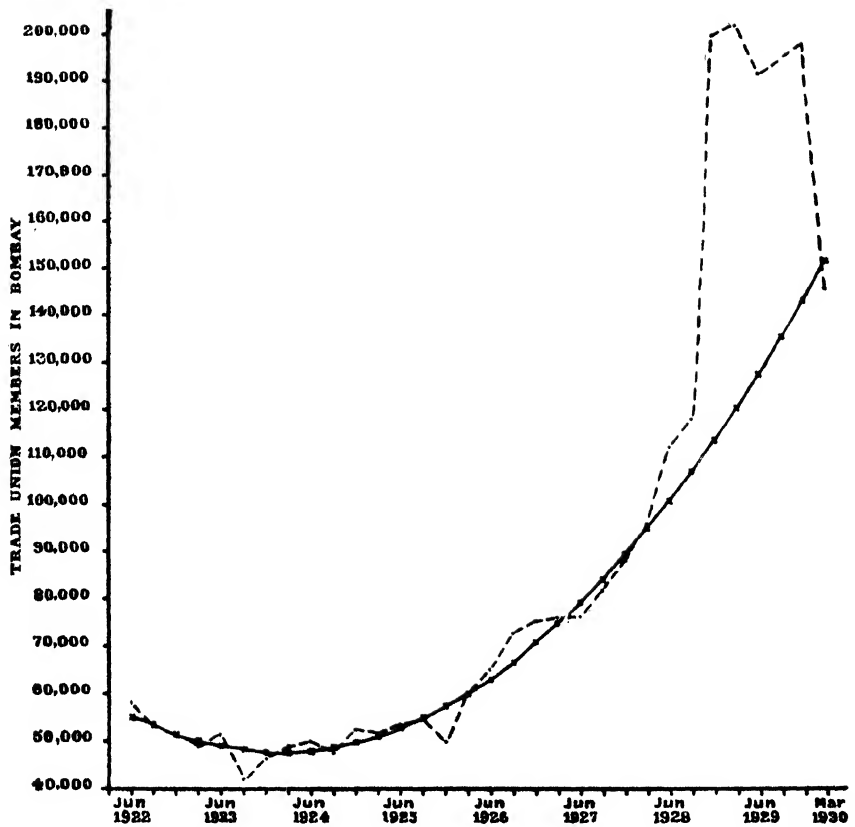




TABLE VII

*Bombay Trade Unions: Growth of Membership*

Quarter ended			As recorded	Estimated by the previous formula	Estimated by the present formula
June 1922	...	...	57,914	55,860	55,148
September 1922	...	...	52,776	53,521	53,039
December 1922	...	...	51,472	51,548	51,276
March 1923	...	...	48,669	49,941	49,856
June 1923	...	...	51,276	48,700	48,788
September 1923	...	...	41,646	47,825	48,063
December 1923	...	...	46,037	47,316	47,684
March 1924	...	...	48,502	47,173	47,651
June 1924	...	...	49,729	47,396	47,964
September 1924	...	...	47,242	47,985	48,623
December 1924	...	...	52,227	48,940	49,628
March 1925	...	...	51,625	50,261	50,979
June 1925	...	...	53,591	51,948	52,676
September 1925	...	...	54,175	54,001	54,719
December 1925	...	...	49,318	65,420	57,103
March 1926	...	...	59,544	59,205	59,843
June 1926	...	...	64,572	62,356	62,924
September 1926	...	...	72,411	65,873	66,351
December 1926	...	...	74,875	69,756	70,124
March 1927	...	...	75,602	74,005	74,243
June 1927	...	...	75,847	78,620	78,708
September 1927	...	...	81,107	83,601	83,519
December 1927	...	...	87,240	88,948	88,676
March 1928	...	...	95,321	94,661	94,179
June 1928	...	...	111,320	100,740	100,028
September 1928	...	...	117,004	107,185	106,223
December 1928	...	...	198,072	113,996	112,764
March 1929	...	...	200,325	121,173	119,651
June 1929	...	...	190,186	128,716	126,884
September 1929	...	...	193,335	136,625	134,453
December 1929	...	...	196,748	144,900	142,378
March 1930	...	...	144,409	153,541	150,649
June 1930	...	...	...	162,548	159,266
September 1930	...	...	...	171,921	168,229
December 1930	...	...	...	181,660	178,588

We may now state in concluding this part that partly with a view to illustrate the remark made in the opening paragraph of this paper that the characteristic feature of the post-war period has been the gradual decline of trade union membership, and partly also with a view to determine how closely the same parabolic law of growth accords with the statistics of other countries, the recorded members in the Unions in Great Britain and Northern



Ireland since 1914<sup>8</sup> have been set forth in the accompanying table with those estimated by a parabolic equation side by side with it. The parabola it will be observed reached its acme by 1921, from which date there has been a continual decline. Incidentally also from the data available in that source, the share of women membership comprised within the total has been calculated and set down in column 4 of that table, from which it will be noticed that after a fairly rapid growth in the beginning and the sharing of the decline above referred to in the aggregate membership, the percentage now stands at about 16.5.

TABLE VIII

*Trade Unions in Great Britain and Northern Ireland :  
Growth of Membership*

Year	Recorded membership (in thousands)	Estimated from the formula $M = 6654.59$ $+ 0.07t^* - 52.6994t_s$	Percentage of Women in Membership.
1914	4145	4072	10.5
1915	4359	4757	12.3
1916	4644	5337	13.5
1917	5499	5811	16.0
1918	6533	6180	18.5
1919	7926	6444	16.7
1920	8339	6602	16.1
1921	6624	6655	15.2
1922	5616	5602	15.5
1923	5420	6444	15.1
1924	5535	6181	14.1
1925	5497	5811	15.2
1926	5209	5337	15.6
1927	4918	4757	16.1
1928	4799	4073	16.5

<sup>8</sup> Extracted in the Bombay Labour Gazette from the Ministry of Labour Gazette for October 1929.

\*  $t$  represents intervals in years from 1921.

**PART B**

We now pass on to an analysis of trade disputes which formed the subject-matter of the second paper.

**Numbers of Industrial Disputes.**

The outstanding feature of this period is stated to be "one of comparative quiescence in the history of the Industrial disputes."<sup>9</sup> The following statistics well justifies this observation :

**TABLE IX**  
*Index Numbers of Trade Disputes (Base year 1921)*

Year	U. S. A. <sup>10</sup>	Great Britain <sup>11</sup>	Australia <sup>12</sup>	India <sup>13</sup>	Bombay <sup>14</sup>
1916	159				
1917	186				
1918	140				
1919	152				
1920	143	211			
1921	100	100	100	100	100
1922	46	75	71	70	93
1923	65	82	44	54	70
1924	52	93	81	34	33
1925	54	79	80	34	45
1926	43	42	58	32	37
1927	30	40		32	35
1928		40		51	71
1929		55		36	45
Mean number for 1921—1929	a multiple of 31·5	514·8	451·2	195·0	91·8

<sup>9</sup> Industrial disputes in India, 1921—28 : Bulletin of Indian Industries and Labour No. 43, p. 10.

<sup>10</sup> Calculated from the data in B.L.G., December 1928, p. 358.

<sup>11</sup> B.L.G., April 1930, p. 810.

<sup>12</sup> Commonwealth Year Book for 1926 and 1927.

<sup>13</sup> Special Publication and B.L.G., April 1930, p. 829.

<sup>14</sup> Special Publication and B.L.G., April 1930, p. 829.

There is a gradual decline in all the cases, varying from about three times as much in the United States of America and about two to two-and-a-half times as much in the United Kingdom, and India, and Bombay, as there is in Australia.

### General Conditions.

In regard to the ' general conditions ' arising in trade disputes the conclusions in the second paper are still maintainable. The results of the analysis of essential statistics are produced below:

TABLE X

*Comparative Figures of Duration on Part of Trade Disputes*

COUNTRY.	ENTIRE PERIOD FOR WHICH STATISTICS IS AVAILABLE			YEARS REGARDED ABNORMAL		
	Years.	Average No. of persons in a strike	Average duration of strikes in days	Years	Average No. of persons in a strike	Average duration of strikes in days
Great Britain ...	1921—29 Nine years.	1504	44	1921 and 1926.	4138	55
Australia ...	1921—26 Six years.	296	8	...	...	...
India ...	1921—29 Nine years.	1874	26	1924-25; 1928-29 Four years	2654	40
Bombay ...	"	1618	43	"	2929	61
Rest of India ...	"	2100	14	"	2404	17

Thus we again find that strikes are relatively more frequent in Great Britain (and naturally so in view of her vast industrial activity), but both in extent and in duration the conditions in India are nearly the same as in that country. To what extent this conclusion is coloured by the influence of Bombay may be gathered from the fact that the average duration diminishes from about 43 days in Bombay to only about 14 days in the rest of India. These

features are likely to be exaggerated by the prevalence of a few important strikes of long duration, or a few abnormal years. Re-stating the case by confining to these abnormal years we notice that in these years the average extent of a strike in Great Britain is as much as 4,138 against 2,929 in Bombay, but the average duration in the latter is longer by at least six days than the former. The first feature reproduces the vastness of certain national industries in the United Kingdom and the second is likewise significant of a speedier settlement attempted in that country.

### Industries Affected.

This suggestion leads us to an investigation of the incidence of extent and duration of trade disputes in the various industries of the country and to ascertain the relation they bear to the total labour employed in each of them. The accompanying table gives the statistics for India from which we notice that arranged in diminishing dimension, the order is 'cotton and woollen mills,' 'Engineering workshops,' 'Railways,' 'Miscellaneous groups,' and lastly 'Mines' and 'Jute mills' with about the same length.

TABLE XI  
*Duration and Extent in Various Industries*

Industry	Average duration	Average extent	Percentage of disputes	Percentage of labourers (factory)
Cotton and Woollen Mills	42'4	1710	46'5	32'4
Jute Mills ... ..	8'3	5140	12'4	25'1
Engineering Works ...	37'9	1260	5'3	5'6
Railways ... ..	80'8	2888	4'5	4'8
Mines ... ..	8'5	1015	1'8	4'0
Miscellaneous ...	12'6	754	29'5	28'1
Total number ...	...	...	1739	1,494,958

Judged by the average number of strikers involved in a strike, we find that the 'extent' is largest in jute mills standing at about

5,140 workmen, Railways coming next with 2,888 and cotton and woollen workers thereafter with a figure of about 1,710. The order among the other three is 'Engineering' first, 'Mines' next, and 'Miscellaneous' last. Though the first result in regard to duration is in obvious accordance with well-known facts, it may be stated in explanation of the second that according to the Factories Report of 1925 the average number of workers in jute mills was 3,886 and in Railway workshops (of which there were only 65) 1,099 against cotton mills of average size of 1,117 members. This naturally explains the tendency to increase the extent of a strike in any industry, as when it is incident upon particular factories in it, the number involved tends also to increase. By frequency of disputes, textiles again regain the predominant share, a share which by comparison with the percentage of factory labour employed in the industry stated in column 5, is certainly preponderant almost entirely at the expense of jute industry, which must therefore be considered relatively a quieter industry. In fact in the other groups of industries there is almost a perfect equality between the two proportions. Reviewing a similar situation in the mining, metal and other industries in Great Britain (which similarly were responsible for a greater proportion of stoppages than the size of the industry warranted) a writer<sup>15</sup> remarks that "to those interested in the establishment and the maintenance of industrial peace, such figures call for an examination of the economic organisation and the psychology of outlook of the workers and the employers in the various industries."

### **Causes.**

With respect to causes of strikes certain definite and significant conclusions were reached in the second paper leading the author to suggest "to strike sanitarians to specialise in preventible diseases." We shall briefly review here the statistics now available and presented in the following table.

<sup>15</sup> "Economist," December 18, 1926.

TABLE XII

*Disputes according to causes in India compared with  
United Kingdom, Australia and Ireland<sup>16</sup>*

Disputes arising out of	India (1921-29)		Bombay (1921-29)		Rest of India (1921-29)		Australia (1921-26)		United Kingdom (1910-24)		Ireland (Four years)	
	No. of disputes	Percentage	No. of disputes	Percentage	No. of disputes	Percentage	No. of disputes	Percentage	No. of disputes	Percentage	No. of disputes	Percentage
Wages (W) ...	783	45	346	42	437	48	752	28	8777	66	184	44
Bonus (B) ...	141	8	85	10	56	6	...	...	...	...	42	10
Personal (P) causes	399	23	223	27	176	19	755	28	2071	15	93	9
Leave (L) and discipline.	67	4	25	3	42	5	656	24	1321	10	47	11
Miscellaneous (?)	349	20	143	18	206	22	543	20	1213	9	56	13
Totals... ..	1739	100	822	100	917	100	2703	100	3383	100	422	100

As a result of the above table it will be seen that the essential conclusions of the second paper, are reproduced again without modification, viz.—

- (1) that a greater proportion of stoppages is due to causes traceable to wage disputes in the United Kingdom than in India, Bombay, Rest of India and even Ireland; but as between these areas themselves the force of that factor is not “significantly different,”
- (2) this finding is also maintainable if it is preferred to combine bonus with ‘wages’ in view of the facts that Bonus disputes are not scheduled separately in United Kingdom,

<sup>16</sup> Survey Industrial Relations, H. M. Stationer Office.

- (3) that the incidence of strikes on account of "personal" causes in each of the areas, India, Bombay, Rest of India or Ireland, is not 'significantly' different from each other, but in these countries it is significantly larger, and more frequent when compared with the same cause in the United Kingdom to such an extent as will persist, from a statistical point, even when observations are extended,<sup>17</sup>
- (4) Australia however seems to be totally different from the others in revealing a feature wherein nearly equal proportions are traceable to each of the causes.

The data for India in general were further analysed with a view to ascertain whether there was any alteration as time went on in the incidence of the individual causes, but it was found that, except in the class Bonus where in the first two years 1921 and 1922 there was a significantly larger number of strikes, there were no differences among the others which could be considered significant or as outside the limit of divergence allowed by statistical theory. In regard to Bonus, however, it has further to be stated that hardly any are reported in the later years, and probably there is also a mere change in the classification in the official records bringing into line with the form adopted in British reports where no explicit mention of Bonus disputes is made. In regard, however, to the incidence of causes in different industries there are conspicuous divergences; for instance, relatively large proportion of wages in Engineering, Miscellaneous, and particularly Mines (where this cause claims as many as 90 per cent of disputes); and also relatively more frequent stoppages arising out of personal

<sup>17</sup> "This statistical verification" it was claimed in the second paper, "will justify the note 'personal' includes disputes over demands for the re-instatement of individuals dismissed from service by employers. Such disputes are very common in industrial concerns in India and are believed to be without parallel, as far as numbers are concerned in any part of the world" and not induce one to brush aside such condemnation as due to the bias of the official mind."

causes among Railway, jute mills and cotton and woollen mills. But in this way we are entering into the problem of association between two factors connected with a strike, which will be dealt with at a later stage.

It is of some interest to determine whether during the nine years that are included in this survey there has been any variations in the incidence of each cause. The following table of percentages in each year has been examined for inter- and intra- class variations, and it was found quite naturally that there was more characteristic variability as between the years, than within the causes in the years.

TABLE XIII

*Percentage of Disputes by Causes from Year to Year*

Year	Wages	Bonus	Personnel	L cause & Hours	Miscella- neous
1921 .. ...	42	19	17	3	19
1922 ... ..	46	11	18	7	18
1923 ... ..	45	7	25	4	19
1924 ... ..	40	5	24	3	28
1925 ... ..	49	4	26	0	21
1926 ... ..	47	3	24	9	17
1927 ... ..	47	0	28	4	21
1928 ... ..	54	0	22	3	21
1929 ... ..	39	1	40	1	19

On combining Bonus strikes along with those due to 'Wages' we found from a different point of view that there was the same degree of variability in the causes, "Personnel," "Miscellaneous," and their combined group, but that the group "leave hours, discipline, etc.," exhibited a differential relation. These last, however, are just about 10 per cent of the total. This conclusion stated otherwise is, that at least in 90 per cent of the strikes,



the causes of strikes do not in any selected year vary to an extent which is comparable with the liability of that particular year to expose itself to the aggregate number of strikes.

### Results of Disputes.

Proceeding to the outcome of disputes, we are in a position to re-affirm the essential conclusion arrived at in the second paper, viz., that Indian disputes are less "successful" in outcome than those in England. The following table in which the statistics as now available are given justifies this conclusion, and enables us to make the following additional remarks. The analysis has been as before to compute the chance P of each of the three classes of outcome in every area investigated and to determine how the differences in any pair of values of P compare with the probable error of that difference.

TABLE XIV

*No. of Disputes by Outcome, Compared with United Kingdom  
Australia and Ireland*

RESULTS	INDIA 1921-29		BOMBAY 1921-29		REST OF INDIA 1921-29		AUSTRA- LIA 1921-26		UNITED KINGDOM 1910-24		IRELAND FOUR YEARS	
	Total No. of disputes.	Percentage to total.	Total No. of disputes.	Percentage to total.	Total No. of disputes.	Percentage to total.	Total No. of disputes.	Percentage to total.	Total No. of disputes.	Percentage to total.	Total No. of disputes.	Percentage to total.
Success ...	285	16	169	21	116	12	632	24	3454	26	94	23
Co m p r o- mise	291	17	84	10	207	23	420	16	4093	44	151	37
Failure	153	67	561	69	592	64	1537	60	5946	80	164	40

While as stated above the conditions in India differ essentially from those in United Kingdom the extent to which there are differences in the nature of the outcomes in Ireland and Australia are not so conspicuous. There is, however, a relatively larger proportion of compromises in Ireland. Now as between Bombay

and the rest of India it is significant to note that while the proportion of failures is not statistically significant, there is a larger share going to success rather than compromises in Bombay than in rest of India. Stated in other words, if a strike is not a failure, it is more likely a success if in Bombay, and more likely a compromise if outside. In fact there are roughly two successes for each case of compromise in Bombay when as in the rest of India the happenings are nearly reversed.

The outcome of strikes in the several industries can be seen from the following table. The general conclusion is that the results are really differential and this matter will be dealt with when we examine later on the association between the several factors in a strike but it will be seen (1) that strikes in jute mills, Railway and Mines end more often in failures, (2) that in these as well as in Engineering works successes are very few indeed, (3) that although relatively largest number of successes is found in cotton textiles, disputes in the miscellaneous industries are settled more frequently by compromise. The last remark throws some light on the observation made a little earlier in regard to the larger proportion of success met with in Bombay as a whole.

TABLE XV

*Percentage of Trade Disputes in Each Industry by Their Outcome*

Industry	Success	Compromise	Failure
Cotton and Textiles ...	20'2	11'3	68'5
Jute ... ..	7'5	12'1	80'4
Engineering Works ...	8'8	25'3	65'9
Railways ... ..	7'7	17'9	74'4
Mines ... ..	0'0	22'6	77'4
Others ... ..	18'2	25'3	56'5

The variation of these results in time is best seen from diagram 3

based on the data given in Table XVI. The comparative portion of the situation in Great Britain is also indicated in the same diagram. It may be stated that in India generally speaking failures have tended to decrease. Also successes too have tended to decrease slightly by a measure about half as much as the rate at which failures have tended to diminish. These diminutions have together contributed to increase the proportion of compromises.<sup>18</sup>

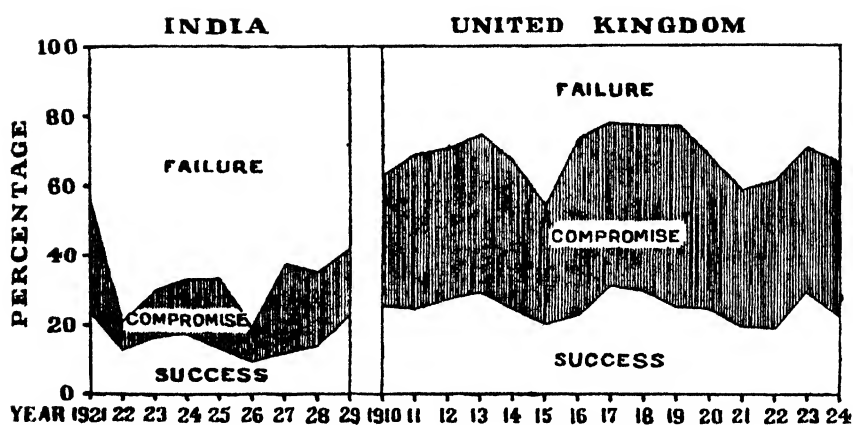
TABLE XVI

*Percentage Distribution of Trade Disputes by Their Outcome from the Year 1921 in India and 1910 in United Kingdom*

UNITED KINGDOM				INDIA			
Year	Success	Compromise	Failure	Year	Success	Compromise	Failure
1910	25.7	38.0	36.3	1921	23.6	22.3	54.1
1911	25.3	43.4	31.3	..	...	...	...
1912	27.6	42.7	29.7	1922	12.4	9.1	78.5
1913	29.1	45.5	25.4	1923	16.0	9.0	75.0
1914	24.7	41.9	33.4	1924	17.4	15.9	66.7
1915	20.3	34.6	45.1	1925	12.8	20.3	67.0
1916	22.9	50.8	26.3	1926	9.4	9.4	81.2
1917	31.4	46.6	22.0	...	...	...	...
1918	29.9	47.0	23.1	1927	11.9	25.4	62.7
1919	25.5	51.9	22.6	1928	13.8	20.9	65.3
1921	19.9	38.8	41.3	1928	22.5	19.5	58.0
1922	19.3	42.2	38.5	...	...	...	...
1923	29.8	41.1	29.1	...	...	...	...
1924	23.0	43.9	43.9	...	...	...	...
For the entire period.	26	44	30	For the entire period.	16.5	16.8	66.7

<sup>18</sup> The equations for the trend for United Kingdom and India work out as follows :

Diagram III: Table XVI





A writer in the *Economist* of June 1926<sup>19</sup> states: "The growth of a spirit of compromise is easily comprehensible. Modern organisation of employers and employed facilitates round-table methods, and as each set of negotiations has been usually to secure the satisfaction of the agreed terms by its constituents, the insertion of 'face-saving' clauses is both natural and desirable." This would seem to maintain that strikes are not after all futile and the review in the same paper, of December 1926<sup>20</sup> emphasises this position though stating it differently. "It is of course a hypothetical question whether the results would be substantially the same if the dispute had been settled without recourse to the strike or lockout. It is, for example, open to argument that if there had been no strikes the results would on the whole have been as favourable to the worker as they proved to be after a stoppage. On the other hand, it is equally a matter for argument that without a stoppage or by resort to other methods, the proportion of the stoppages which terminated in favour of the employers might have swollen the percentage of settlement—by compromise."

### Methods of Settlement.

In the statistics of other countries it is usual to classify settlements by the methods adopted to settle the disputes and in view of the legislation about trade disputes now going on in this country, we think it desirable that official reports should furnish these data in future.

	India (Origin 1925)	U. K. (Origin 1917)
Percentage of successes	16—29t	26—21t
" " compromises	17—89t	44 + 12t
" " failures	67—60t	30 + 09t

In the United Kingdom too, compromises have tended to increase (though with a diminished secular trend) and successes have tended to decrease (with about a rate almost equal to that in this country). Where the experiences of the two countries seem to differ is in the proportion of failures—United Kingdom tending to show a very slight increase whereas India tends to show that failures are becoming relatively fewer. This is as it should be seeing that even with these failures India constitutes as high a proportion as 67 per cent.

<sup>19</sup> Extracted in B.L.G., July 1926, p. 1081.

<sup>20</sup> Extracted in B.L.G., January 1927, p. 411.

**Duration.**

We may now pass on, however, to the duration of strikes. The method arrived at in a previous part of this paper of stating the average duration by division of certain aggregates is liable for considerable distortion of actual experiences, because of the influence exerted by some large national strikes, or certain long-drawn ones. A regular frequency distribution would put the matter from a statistical point of view more accurately. But in view of Indian statistics being available in broad categories, a detailed analysis of the following figures has not been made. It will be seen, however, that whereas 55 per cent were settled in Australia in about a duration of a couple of days no more than about 21 per cent were settled in India so rapidly. Even in New Zealand where settlements seem to be slower than in Australia more than a third of the stoppages were disposed off in that period. This feature illustrates, as has already been remarked, that there are better facilities in the two latter countries to bring a dispute speedily to a close than in India.

TABLE XVII

*Frequency Distribution of Duration of Strikes in India,  
Australia and New Zealand*

Strikes lasting for	Bombay : 8 years, between 1921-29 (for approximately corresponding periods)	Australia <sup>21</sup> 1925-26	New Zealand <sup>22</sup> 1906-23
One day and less		350	163
One to two days	156	127	48
Two to three days		59	89
Three days to one week ...	319	66	39
One week to two weeks ...		106	58
Two weeks to four weeks ..	231	69	85
Four weeks to six weeks ...			26
Six weeks to eight weeks ...	320	48	21
Eight weeks and over ...		34	50
Indefinite ...	...	...	54
Total ...	726	859	578

**Seasonal Variation.**

Is the incidence of strikes in India, it may next be asked, differential in the various months of the year, suggesting a periodic or seasonal variation? In regard to this identical question raised in the second paper, it was stated on the data then available that, although no single month showed a predominant fluctuation, the second half of the year generally witnessed a larger proportion of strikes. At the present time also we have too few data to permit us to attempt periodogram analysis which alone we must submit would state the position definitely in regard to the question. But however we have attempted one of the methods<sup>23</sup> used in the analysis of seasonal variations, allowing for a parabolic trend in the total number of disputes during the year 1921-1922. This adjustment for the trend is equivalent to distributing the strikes reported in column 2 of Table XVIII below as actually occurring in the year in the manner shown in column 3. When they exhibit a uniformity in progression the assumption thereby made amounts to the removal of fluctuations due to purely accidental circumstances.

**TABLE XVIII**

*Total Numbers of Strikes in India Adjusted by a  
Parabolic Curve of Fit*

Year	Reported No. of strikes	Equivalent No. from a parabolic trend
1921	376	359
1922	272	277
1923	209	213
1924	132	165
1925	133	134
1926	127	120
1927	129	123
1928	200	143
1929	134	178

<sup>23</sup> Mills Statistical Method, Chap. VIII, Method I.



We must at the same time see that the distribution among the months of the year which forms the basis for the index of the monthly fluctuation is not altered in any manner; and this can be done by dividing these new totals in the same proportion in which the original total was divided among the twelve months—for instance, the equivalent number for January 1921 is  $\frac{42}{376} \times 359$ . This method would find us with the following numbers of the strikes in the different months during the entire period 1921—1929, these numbers being reduced in the next column as percentages of the mean number in any month and are thus the monthly indices of seasonal variation that we are seeking.

**TABLE XIX**  
*Seasonal Indices of Trade Disputes in India*

Months	Total adjusted number	Index (Mean value = 100)
January ...	178.1	125
February ...	182.6	98
March ...	154.1	108
April ...	177.2	124
May ...	155.8	111
June ...	115.7	81
July ...	182.9	98
August ...	128.5	90
September ...	98.6	69
October ...	162.9	114
November ...	136.4	96
December ...	135.9	95

These final indices are reproduced in diagram 4 from which it will be seen that

- (1) contrary to the tentative observation in the second paper reproduced above, the first half of the calendar year witnesses relatively larger strikes,
- (2) the liability, however, for increased number of occurrences in October (also referred to in the second paper) still exists though at a reduced level,
- (3) in view of the three pairs of "crests" and "troughs" in the figure, the period of recurrences is not so long

Diagram II: Table IX

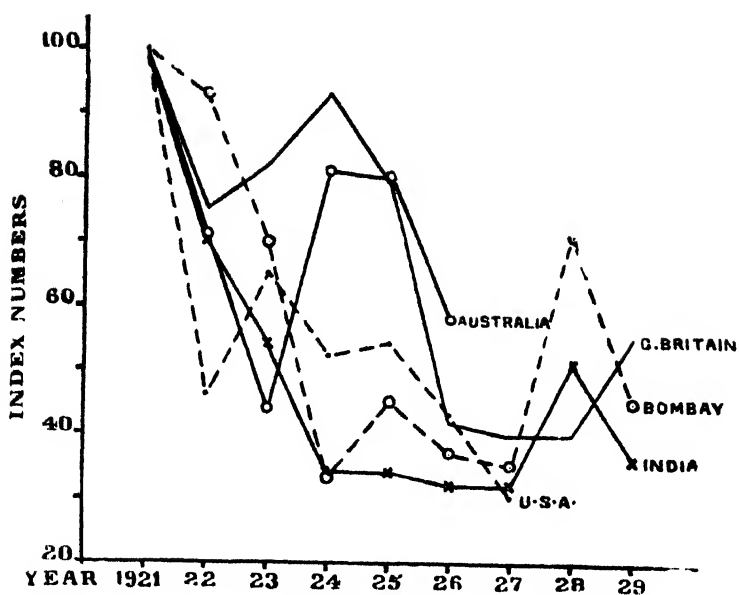
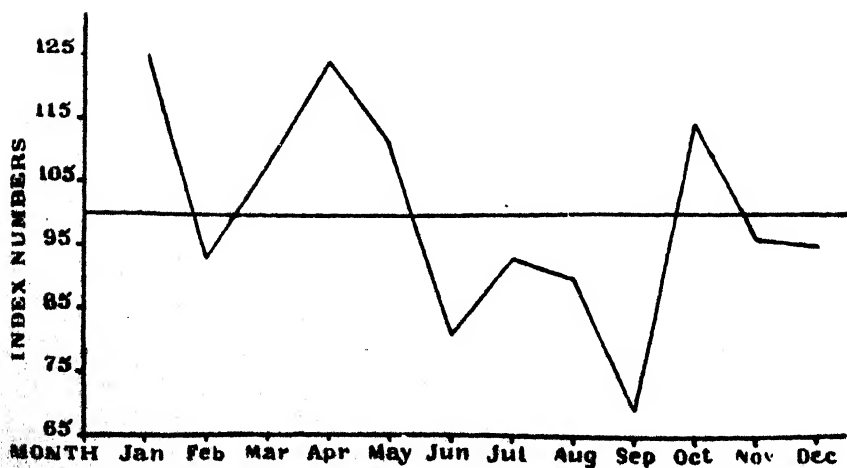


Diagram IV: Table XX col 3





as a twelve months but more likely six months or three months.

At a late stage in the progress of the work it occurred to us that a better clue was likely to become available if the wage questions alone had been considered, but the compilation of even the raw data would involve much labour.

In another paper by K. B. Madhava and K. V. Krishna Sastri the correlation between this factor and absenteeism is discussed.

### Association Between Different Factors in a Dispute.

We conclude this paper like the second paper with the discussion of the question of association between the different factors entering into disputes (taking them into pairs, viz., T, the kind of trade affected, D, the duration of the strike, E, the extent or number of persons involved, C, causes or demand originating the strike, R, the result or outcome of the dispute.) The ten tables given below reproduce the raw data compiled from the details furnished in the successive issues of the Bombay Labour Gazette as it occurred and the method employed was the same as in the previous inquiry—the coefficients given being the mean contingency  $C_1$  and the mean square contingency  $C_2$ .

TABLE XX

*Values of C (upper half) and C (lower half)*

	C	R	E	D	T
T	'1301	'1139	'1142	'0835	
D	'1996	'2410	'2852		
E	'2095	'1402			'0252
R	'3487	'1749		'1073	
C			'0518	'057	'0362
		'1057	'0977	'0971	'0328
					'1031

<sup>24</sup> These two values and Table XXI (8) from which they are calculated, are entered here as obtained. It will be noticed that these values are lower, (and to a significant extent also) than those in the second paper. But it must be stated that owing to some misunderstood directions certain mistakes in the classi-

Our conclusions are:—

(1) That out of the ten results stating the connection between each of the two variables T, E, D, C and R that may be possible each variable occurs, of course, in combination with another in four places, and in the case of cause (C) there is a significant correlation with all the factors—it most significantly affects the outcome (R), but it shows a stable association also within the industry affected (T), the extent (E) and duration (D).

(2) Result is very significantly governed by cause (C) but the other three factors have very uncertain influence. However the value of the correlation with E is the next largest. This emphasizes the importance of extent of strike, or the strength of the labour organisation in influencing the result.

(3) Extent, (E) or the number of persons going on strike, has its influence most in determining duration (D) or (T) and lastly in fixing up (R) result.

(4) The duration (D) of a strike is influenced mostly in determining (R)—and in fact the greater the duration of a strike the less likely is its outcome to be favourable to the interests of the labourers.

fication of entries have led to inaccuracies in the preparation of the table. This was detected during verification, but the work could not be repeated and we have allowed them to stand as they are. As details for a similar table were readily available for the statistics of 1,598 strikes reported in India (as a whole) from the Government Review recently published we have analysed these also. These results are entered in the respective places in the lower line and they will be found to be in greater agreement with the results in the previous paper. The table that may replace XXI (8) is given below :

	W	B	P	Z	Totals
T <sub>1</sub>	356	112	252	213	933
T <sub>2</sub>	77	4	35	43	159
T <sub>3</sub>	296	23	57	180	506
Totals	729	139	344	386	1598

Again by calculating the percentage deviations of the actual numbers in any particular sub-group among the following tables, from those numbers that may be expected on the basis of independent probability we find that the following is the order in descending degree of importance in leading strikes to successful termination:—

*Causes*—Bonus, Miscellaneous, Wages, “ Personnel ”;

*Duration*—2, 5, 8 and 10 or more days;

*Extent*—Medium sized, large sized, small sized establishment;

*Trade*—Very doubtful owing to the small values of C, but the order is perhaps Textiles, Miscellaneous, and transport, etc.

We are therefore led to reiterate the following prescription for a successful strike, arrived at already in the second paper:

A fairly strong organisation—Well stirred with a good cause—Administered for a short duration.

TABLE XXI

(1)

RESULTS				
	Successful S	Com- promise C	Failure F	Total
Totals	122	86	478...	686
Wages: W	54	46	200	308
Bonus: B	26	18	11	55
Personnel: P	15	19	161	195
Miscellaneous: Z	27	3	98	128

(2)

RESULTS				
	Successful S	Com- promise C	Failure F	Total
One, two or three days	76	40	226	342
Four, five or six days	21	18	108	147
Seven, eight or nine days	15	13	53	81
Ten or more days	10	15	91	116

(3)

Small: S upto 199 numbers	44	29	226	299
Betwixt: B(200—499)	45	27	129	201
Large: L(500 and more)	33	30	123	186

(4)

Textiles	101	68	409	578
Transport and Engineering	6	4	27	37
Miscellaneous	15	14	42	71

(5)

CAUSE					
	W	B	P	Z	Total
One, two or three days	128	20	122	72	342
Four, five or six days	80	11	35	21	147
Seven, eight or nine days	44	11	11	15	81
Ten or more days	56	13	27	20	116
Total	308	55	195	128	686

(6)

EXTENT				
	S	B	L	Total
One, two or three	182	91	69	342
Four, five or six	59	54	34	147
Ten and more days	26	32	58	116
Total	299	201	186	686

(7)

TRADE				
	Textiles	Transport and Engineering	Miscellaneous	Total
One, two or three	293	16	30	342
Four, five or six	117	10	20	147
Seven, eight or nine	72	3	6	81
Ten or more days	96	8	12	116
Total	578	37	71	686

(8)

CAUSE					
	W	B	P	Z	Total
Textiles	259	46	172	101	578
Transport & Engineering	13	1	12	11	37
Miscellaneous	36	8	11	16	71

(9)

Small	124	26	113	36	299
Betwixt	100	14	41	46	201
Large	84	15	41	46	186
Total	308	55	195	128	686



(10)

TRADE				
	Textiles	Transport and Engineering	Miscel- laneous	Total
Small	240	17	42	299
Betwixt	179	9	13	201
Large	159	11	16	186
Total	578	37	71	686

# MORTGAGE DEBT OF FOUR TALUKS IN MYSORE STATE

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## 1. The Method of Investigation.

For an intensive survey of mortgage debt the investigator is obliged to go to the Sub-Registry Offices where every mortgage-deed of the value of Rs. 100 and above is required by law to be registered while mortgages involving sums of less than Rs. 100 may be registered at the option of the parties. In Mysore at every Taluk Headquarters there is an office which registers the documents and files the actual copies of the bonds executed by the parties.

Mortgage-deeds constitute valuable raw material for the economic investigator. They are to the economist what bricks are to the builder and customs to the sociologist. The classification of the data contained in the bonds and deeds will yield general conclusions regarding the exchange of immovable property and the conditions under which that exchange takes place. A mortgage-deed gives the name, caste, occupation of the mortgagor, the name, caste, and occupation of the mortgagee, the name of village, hobli and taluk wherein both of them reside, the purpose of the loan, the amount of loan, the rate of interest, the term of payment, the extent of land or house or other immovable property mortgaged, the boundaries of the property, the witnesses for the agreement and sometimes the rate of penalty also.

It is beyond the resources of two individuals to study all bonds in all the Registry Offices. All that they can do is to select a few taluks which are representative of the economic conditions of the country, make a detailed study of the mortgage-deeds in these taluks, check the conclusions reached by personal investigation in

a few typical villages and test the final results of the survey by a study of the annual reports of the Registration Department. Such a method has been followed in the present survey.

The Mysore State may be said to consist of two separate economic regions each of which has well-marked and distinctive features. Of these the *malnad* or hill country lies to the west and comprises the tracts bordering on the Western Ghats. It is a land of hill and forest, fertile soil and perennial stream. The incessant rain of the monsoon season confines the people to their own homesteads while the malaria of the swampy regions reduces the stamina of the people and the number of the population. The *malnad* products are areca, coffee, cardemom and the plantain. The second division of the state occupying an area much greater than the *malnad* is the maidan or open country. The distinguishing features of the maidan are widespreading plains, clusters of villages and populous towns. A wide range of crops are grown: rice, cotton, ragi, sugarcane and groundnut. The intermediate region between the *malnad* and the maidan partakes of the characteristics of both and in most places the transition from the one to the other is by almost imperceptible stages.

For the purposes of this enquiry one taluk from the *malnad* area, one from the maidan area and two from the intermediate area were selected. All the mortgages registered in 1927-28 in these taluks were studied. The total number of registered mortgages examined were 4,129. They were distributed as follows<sup>1</sup>:

	Simple	Usufructuary
Mysore	1,756	386
Sagar	92	10
Madhugiri	601	66
Hassan	1,122	96
	<hr/>	<hr/>
	3,571	558

<sup>1</sup> Cf. The Board of Economic Enquiry, Punjab, Rural Section Publications 5 and 14, edited by H. Calvert.

## 2. Caste of Lenders and Borrowers.

The following table indicates the extent to which the several castes are involved in debt:—

No.	Caste.	SIMPLE MORTGAGES.				USUFRUCTUARY.				TOTAL.			
		BORROWERS.		LENDERS.		BORROWERS.		LENDERS.		BORROWERS.		LENDERS.	
		No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
			Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
1	Brahmins	283	2,48,528	513	2,32,753	59	31,940	57	28,886	342	2,80,468	570	2,61,639
2	Vokkaligars	669	1,92,636	625	1,32,900	68	25,530	70	18,943	737	1,18,166	695	1,51,843
3	Lingayats	351	91,073	314	60,945	41	9,915	44	13,815	15,45	15,8	15,02	10,75
4	Kurubas	317	53,138	168	25,141	25	5,770	40	7,426	392	1,00,948	358	74,780
5	Panchanas	235	28,761	5	425	36	3,437	15	2,261	342	63,908	308	32,567
6	Parivara	93	13,953	28	4,485	17	2,420	...	...	271	32,198	20	2,586
7	Panchama	34	6,075	36	5,195	15	3,175	7	1,680	6,53	2,15	1,41	58
8	Sadara	58	8,605	27	5,100	7	1,357	4	446	20	16,373	28	4,465
9	Vaiaaya	20	10,223	227	1,03,327	7	5,875	23	27,630	49	9,250	43	6,875
10	Mohomedan	133	41,673	121	37,685	88	27,260	99	25,520	26	1,6	1,12	65
11	Miscellaneous	1378	4,11,277	1507	5,03,006	195	82,020	199	72,092	65	9,962	31	5,546
										1,43	16,098	250	1,30,957
										90	1,94	5,28	11,6
										341	68,933	220	63,305
										974	8,73	10,66	8,12
										1,573	4,93,297	1,706	5,75,098
										36,86	37,35	38,90	40,74
	Total	3571	11,10,942	3571	11,10,942	558	1,98,699	558	1,98,699	4129	13,09,641	4129	13,09,641
										100	100	100	100

Among the borrowers as well as among the lenders the first place is easily taken by the Brahmins. Next to them in both categories come the Vokkaligars who form the bulk of the farming population. The economic status of castes like the Kurubas and the Panchamas is illustrated by the small amount they borrow and the still smaller amount they lend. The capacity to borrow no less than the capacity to lend depends upon the assets possessed and property owned. Prosperity enables a man to borrow just as it causes him to lend. The class "Miscellaneous" is an unwieldy one containing about ten minor castes among the Hindus and also all the Christians. It has borrowed as well as lent the largest amount.

### A. Profession of Lenders and Borrowers.

The following table illustrates the profession of lenders and borrowers respectively:—

No.	Profession	BORROWERS				LENDERS				TOTAL			
		SIMPLE		USUFRUCTUARY		SIMPLE		USUFRUCTUARY		BORROWERS		LENDERS	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
			Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
1	Ryots	2564	4,92,829	229	61,371	1766	3,15,104	180	39,261	2,793	5,54,800	1,946	3,54,365
2	Traders	246	2,11,039	116	47,816	492	1,91,619	138	66,431	5643 %	3777 %	4935 %	243 %
3	Government Servants.	163	95,372	53	20,115	147	1,43,172	51	20,816	363	2,68,851	630	2,56,050
4	Pensioners	19	24,300	3	650	44	25,040	11	3,000	1389 %	2153 %	1925 %	2533 %
5	Moneylenders	...	...	...	...	109	56,737	6	13,750	216	1,15,487	198	1,63,988
6	Landlords	17	31,770	8	3,800	90	48,242	10	1,985	452 %	935 %	683 %	1170 %
7	Lawyers	3	41,950	1	4,00	19	23,775	1	1,800	92	24,950	55	28,040
8	Others	143	50,559	47	17,950	147	1,43,172	35	10,365	53 %	135 %	180 %	138 %
9	Not stated	416	1,90,124	101	42,597	673	1,64,081	156	41,391	...	...	115	70,487
	Total	3571	11,10,944	558	1,98,699	3571	11,10,944	558	1,98,699	25	35,370	26 %	604 %
										95 %	233 %	100	50,237
										4	18,950	192 %	286 %
										18 %	198 %	35 %	25,575
										190	68,509	182	1,33,537
										621 %	679 %	619 %	95 %
										517	2,93,721	788	2,03,372
										1741 %	1930 %	2162 %	1877 %
										4129	13,08,641	4139	13,08,641
										100 %	100 %	100 %	100 %

(a) *The Borrowers*.—The largest number of borrowers is found amongst the ryots. They borrowed 37 per cent of the whole amount. The average amount borrowed per ryot is Rs. 198-10-0 as against Rs. 317-2-0, the average amount for all the borrowers. Nicholson's survey in Madras in 1895 showed that the mortgage debt per ryot was Rs. 194.<sup>2</sup> The size of the loan for Mysore as well as Madras appears small, but respectively to the size of the average holding it is formidable. And since the size of the loan applies to mortgages only it speaks very little as to the mass of ordinary credit.

Agriculturists everywhere must and do borrow and probably there is no ryot who has not at one time or another borrowed. The mere fact of borrowing signifies no disability, for credit is not necessarily objectionable nor is borrowing always a sign of weakness. An agriculturist's capital is locked up in his land and stock and must be mobilised now and again to finance his farming operations. But a vast body of our ryots borrow for unproductive purposes and live only by means of borrowing. They borrow seed, cattle, manure, grain, implements or money in order to purchase these articles. And they borrow also for the sake of ostentatious and extravagant social expenditure. As was pointed out by M. L. Darling, there are causes that *compel* a man to borrow, such as drought and disease, uneconomic holdings and expensive ceremonies just as there are causes that *enable* him to borrow, such as a rise in land values, inflation of prices, security of property and growth of transferable rights in land. Hence debt is due to prosperity and poverty alike: its existence is due to poverty and its volume to prosperity.

A feature of the table that requires explanation is that traders, pensioners, lawyers and officials should be compelled to borrow on mortgage to a very large extent. In an agricultural country

<sup>2</sup> *Vide* Nicholson's Report regarding the possibility of introducing Land and Agricultural Banks in the Madras Presidency, Vol. I, p. 236.

almost the sole form of investment is property in land and buildings. Money is borrowed or lent on the security of such property.

(b) *The Lenders*.—Generally speaking all those who have wealth to spare lend it: they are pensioners, officials, landlords, lawyers, traders, *sahukars* and above all ryots. As a matter of fact the ryots form a great lending class, second in importance only to the traders. Like Madras and unlike the Punjab village credit is granted generally by villagers who are mostly ryots. The agriculturist-moneylender is preferable to the professional moneylender in so far as the land may pass from one cultivator to another, but he may prove a worse enemy of the cultivator because while the professional moneylender is content to rely on the crop for repayment the agriculturist-moneylender may conspire for the land as well as for the crops.

The trader plays an important part in the rural economy of Mysore. He is partly moneylender and partly shopkeeper. He supplies the farmer's requirements and recoups himself at the time of the harvest. Very often he protects his advances by a mortgage on the debtor's property. In the 128 villages under examination he was responsible for 25 per cent of the mortgage debt, a very large amount for the traders who cannot ordinarily afford to lock up their funds in long-term investments.

The professional moneylenders number hardly 3 per cent of the total; and the credit given by them is only 6 per cent of the total. The comparatively insignificant part played by him is due partly to the fact that the ryot depends to a very large extent on fellow-ryots for his credit and partly to the fact that the professional moneylender does not like to be known by that honorific and seeks to soften the acerbities of his calling by giving himself out as a trader or by allowing himself to be returned under the heading like "Others" or "Not stated." Whether the clutch of the moneylender is as close and universal in Mysore as it is in the Deccan and the Punjab is a difficult question. Observers are apt to apply to the mass the few cases which come within their own



experience. They appear to them distressing and inequitable because they apply to friends and relatives. Exceptional cases cannot therefore be taken as samples of general practice or prevailing custom. Our enquiry showed that the grip of the sahukar except in certain areas was not fastened on the rural population and that the Mysore agriculturist depended only to a limited extent on him for credit.

#### 4. The Amount of Loans.

The following table shows the total number of mortgages and the total amount borrowed in the respective groups:—

No	Amount	No	Without Possession	No.	With Possession
			Rs. a. p.		Rs. a. p.
1	Rs. 25 and below	94 2.63%	2,354 0 0 2%	7 1.26%	161 0 0 .08%
2	Above Rs. 25—49	69 1.93%	2,605 4 0 .22%	15 2.68%	535 0 0 .26%
3	Above Rs. 49—99	614 17.19%	35,141 0 0 3.16%	59 10.57%	3,316 0 0 1.66%
4	Above Rs. 99—199	1336 37.41%	1,50,888 4 0 13.53%	184 32.97%	21,898 0 0 10.76%
5	Above Rs. 199—499	987 27.63%	2,63,981 14 0 23.76%	194 34.76%	54,231 0 0 27.29%
6	Above Rs. 499	471 13.21%	6,56,678 12 0 59.13%	99 17.77%	1,19,068 8 0 59.45%
	Total ...	3571 100%	11,10,944 2 0 100%	558 100%	1,98,699 8 0 100%

The salient point to be noted in the table is the size of the loans. The 4,129 mortgages average Rs. 317 in individual amount. That the pressure of the loan is not so light as the figure may indicate is shown by the consideration that the average holding in Mysore is about 6.5 acres, that over 50 per cent of the holdings are below 5 acres in size and that dry land as distinguished from

irrigation or wet land is the predominant form of cultivation. In the Punjab the average holding is about 10 acres and an average debt of Rs. 463 per proprietor, secured and unsecured debt being included, was regarded by Darling as "considerable."<sup>3</sup> Nicholson's enquiry of 1895 into the Mortgages of the Madras Presidency showed that the average was Rs. 194, not a small sum when it is related to the comparatively low level of prices then existing.<sup>4</sup>

<sup>3</sup> *Vide* M. L. Darling, *The Punjab Peasant in Prosperity and Debt*, p. 9.

<sup>4</sup> *Vide* Nicholson's Report, p. 236.

5. **Purposes of the Loan.**

The following table shows the main purposes of the loan and the amount borrowed under each head :—

No.	Purpose	SIMPLE MORTGAGES		USFRUCTUARY MORTGAGES		TOTAL (WITH OR WITHOUT POSSESSION)	
		No.	Amount Rs.	No.	Amount Rs.	No.	Amount Rs.
1	Settlement of Prior Debts	1297 36.32 %	4,97,507 44.78 %	268 48.02 %	1,15,796 56.27 %	1565 42.17 %	6,13,293 51.52 %
2	Land Improvement	100 28 %	21,380 1.92 %	10 1.79 %	4,050 2.03 %	110 2.30 %	25,430 1.97 %
3	Purchase of Cattle, etc.	245 6.86 %	26,422 2.37 %	12 1.15 %	1,335 .67 %	257 4.01 %	27,757 1.52 %
4	Purchase of Land	371 7.58 %	92,277 8.36 %	6 1.07 %	1,630 .8 %	277 4.32 %	93,907 4.58 %
5	Payment of Kists	47 1.31 %	29,377 2.64 %	5 .9 %	1,290 .63 %	53 1.11 %	30,667 1.63 %
6	Trade Expenses	42 1.17 %	55,275 4.97 %	14 2.50 %	7,030 3.53 %	56 1.84 %	62,305 4.25 %
7	Marriage, Festivities, etc.	528 14.78 %	85,375 7.68 %	40 7.16 %	5,745 2.89 %	568 10.91 %	91,120 5.28 %
8	Maintenance	103 2.88 %	13,338 1.2 %	18 3.22 %	3,200 1.61 %	121 3.05 %	16,538 1.40 %
9	Miscellaneous	431 12.07 %	86,163 7.75 %	81 14.51 %	16,868 8.48 %	512 13.23 %	1,03,031 11.5 %
10	More than one	507 14.23 %	2,03,830 18.33 %	104 19.68 %	41,865 21.09 %	611 16.94 %	2,45,695 16.36 %
	Total	3371 100 %	11,10,944 100 %	558 100 %	1,98,699 100 %	4129 100 %	13,09,643 100 %

In 42 per cent of the registered deeds the cause of mortgaging was set down as settlement of prior debts, the amount involved being 51 per cent of the total consideration money. It would certainly be a most encouraging feature if the loan were applied to the purpose for which it was ostensibly taken. As it happens in the majority of cases a settlement of a prior debt is no more than the renewal of a debt. The term does not mean generally that the loan is applied to the liquidation of a previous debt, but that the creditor, not being satisfied with the prospects of the loan being returned to him has insisted on more certain and substantial security than was formerly given. The creditor has passed on from the first stage where he was content to lend upon the general character of the debtor to the next stage where he thinks it prudent to back up his loans with mortgage securities. An important fact brought out by the table and confirmed by experience is that land improvement forms an almost insignificant cause of borrowing, being responsible only to 2 per cent of the total money borrowed on mortgages. Digging of wells, deepening of tanks, constructing of bunds tend to the improvement of land and produce a return of the amount of capital invested. It is also a disquieting feature of the registration statistics that agriculturists mortgage their properties for such unproductive purposes as social functions. The sum expended on such items is much greater than is indicated by the table, because a great part of the expenditure on items such as "miscellaneous" and "more than one" is devoted to social functions and also money borrowed for one purpose, e.g., land improvements or purchase of cattle is frequently misapplied.

### 6. Period of Mortgage.

The following table illustrates the term of payment and the amount borrowed :—

No.	Term of Payment	WITHOUT POSSESSION		WITHOUT POSSESSION		TOTAL (WITH AND WITHOUT POSSESSION)	
		No.	Amount Borrowed	No.	Amount Borrowed	No.	Amount Borrowed
			Rs.		Rs.		Rs.
1	On demand ...	637	1,74,145	10	2,090	647	1,76,235
2	No term ...	592	1,16,990	35	8,825	627	1,25,060
3	6 months and less ...	92	25,022	18	2,355	110	27,377
4	Above 6 months —1 year ...	744	1,84,798	42	6,705	786	1,91,503
5	Above 1 year —2 years ...	801	1,82,889	58	16,990	859	1,99,879
6	Above 2 years —3 years ...	601	1,88,249	97	33,321	698	2,21,570
7	Above 3 years —5 years ...	217	1,46,808	177	61,987	394	2,08,795
8	Above 5 years	87	1,00,148	126	65,416	213	1,65,564
						1254%	2075%
	Total ...	3574	11,10,944	559	1,98,699	4133	13,09,643
						100%	100%

An outstanding feature of the mortgage transactions is that they run for a very limited period, a considerable number being redeemable on demand. The period of the loan is a very important consideration from the standpoint of the mortgagor. If the mortgage were on demand for a short period then a renewal of it rendered necessary by the long-period operations of agriculture would involve him in considerable expenditure such as the cost of stamps, registration fees, allowances for witnesses, etc. Moreover it is not likely that any loan taken for such purposes as purchase of cattle and improvement of land could be repaid out of the additional earnings in the space of a few years.

Another point to be noted is the large number of "no term" or non-terminable mortgages. These are agreements which do not provide for their own automatic extinction after a stipulated num-

ber of years. Nearly 9 per cent of the cases under investigation contain no clauses regarding the redemption of the mortgage. Especially in the case of the usufructuary mortgages all the profits from the land are usually reckoned as equivalent to the interest on the debt, no credit being taken towards the repayment of the capital from the profits. The result is that the mortgage may continue indefinitely and the mortgagee having found a most profitable investment for his capital has no inducement to seek the return of his loan. The Royal Commission on Agriculture have agreed with the proposal that no usufructuary mortgage of agricultural land should be permitted by law unless provision be made for automatic redemption within a fixed period of years, of which twenty should be the maximum.<sup>5</sup>

The average term for mortgages without possession is below two years and with possession about five years.

#### 7. Conditions Relating to Rate of Interest.

The following table gives the rate of interest charged and the amounts borrowed:—

No.	Rate of Interest	Total No. of cases.	Amount borrowed.
1	6% and below	49	41,736
2	Above 6%—9%	61	57,967
3	Above 9%—12%	894	3,71,025
4	Above 12%—18%	1755	4,37,782
5	Above 18%—24%	270	67,235
6	Above 24%	98	14,956
7	Interest in kind and service	444	1,20,242
Total		3,571	11,10,944

<sup>5</sup> Vide Report of the Royal Commission on Agriculture, p. 419, para 353.

Undoubtedly these rates of interest classified from the registration statistics are very high. Nearly half the mortgage transactions carrying an interest load range between 12 and 18 per cent. The average may be said to be in the neighbourhood of 15 per cent. It is impossible that ryots can thrive with credit at such prices. The burden becomes particularly heavy when it is realised that there are many factors, some of them invisible, behind the mortgage transactions. Thus discount and commissions are frequently deducted in addition to the interest expressed in the bond or the interest may be deducted in advance to the disadvantage of the borrower. There are numerous dues and services which custom requires of the debtor such as gifts of fodder or vegetables and services to repair tanks or to give evidence. The registered deeds, especially mortgages, do not generally represent an individual transaction where a loan is given for a security pledged but is the last stage of a series of borrowings with interest and compound interest added to the capital at every stage. When all these factors are taken into consideration the documentary rates of interest, high as they are, swell to enormous proportions. The Mysore example may be contrasted with that of the Madras Presidency and the Punjab. Nicholson in his survey of mortgages in Madras in the year 1895 discovered that the average rate was only about 12 per cent and that three-fourths of the mortgages bore interest between 9 and 18 per cent.<sup>6</sup> Darling found that for secured loans the rates in the Punjab are comparatively low: a loan against jewellery can be had at 12 to 18 per cent, and against land at 9 to 12 per cent: and in the case of the latter, if possession is given, the return will probably not be more than 4 to 6 per cent.<sup>7</sup>

A by no means insignificant feature of rural trade is the amount of capital advanced in the shape of produce and the interest charged on it which is also payable in produce. In 15 per

<sup>6</sup> *Vide* Nicholson's Report, p. 234.

<sup>7</sup> *Vide* M. L. Darling, *The Punjab Peasant in Prosperity and Debt*, p. 218.

cent of the mortgage transactions amounting to nearly 11 per cent of the amount borrowed interest was stipulated in kind and services. On payments in produce 25 per cent seems to be the ordinary rate charged. The rate of interest payable in grain is necessarily high. The reasons are that there is a fall in prices and plenty in supply at the harvest season when the interest is paid, that grain deteriorates in storage, that the lender must take precautions lest the borrower should dispose of his grain without satisfying the claims upon him and that the rate of interest payable in produce is usually a matter of custom and immemorial practice. The moneylender who combines moneylending with grain-dealing does not dislike payment in produce. It gives him the grain he wants for his trade as shopkeeper. The accounts can be manipulated with ease. Moreover, it is an easy thing to advance bad grain and receive good in return.



# THE VICISSITUDES OF INDO-CHINESE COMMERCE SINCE 1875

BY

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## I

Our trade with China began in the remote past. It was, however, greatly developed in the nineteenth century by the activities of the East India Company the bulk of whose commerce consisted of the export of Indian opium to that country. Owing to these earlier developments, China occupied for a long time a very prominent position among the countries trading with India, being next to only the United Kingdom in order of importance. But the gradual decay and the ultimate extinction of the export trade in opium which was the mainstay of Indo-Chinese Commerce for a long time brought about a very unflourishing condition as the following figures<sup>1</sup> will indicate:—

(Value in lakhs of Rupees)

	Exports to China	Imports from China	Total amount of Indo-Chinese Trade
1875-76	1150	152	1302
1880-81	1494	199	1693
1890-91	1444	242	1686
1900-01	1186	255	1441
1905-06	2151	177	2328
1910-11	1934	244	2178
1915-16	934	326	1290
1920-21	1549	543	2092
1925-26	1829	345	2174
1929-30	1610	483	2093

<sup>1</sup> Though a British possession, the trade with Honkong really means a portion of our trade with China, the port being mainly an entrepôt for Chinese

Indeed, the growth of Indo-Chinese trade has been far behind the general development of the total trade of India, as the following index numbers will vividly show :—

	Total Indian Trade	Indo-Chinese Trade
1875-76	100	100
1880-81	131	130
1890-91	177	129
1900-01	194	110
1905-06	282	179
1910-11	354	167
1915-16	348	99
1920-21	634	161
1925-26	630	167
1929-30	576	161

Thus China which at one time occupied the second place of importance, contributing to about 13.4 per cent of the total trade of India in 1875-76, has declined heavily in status and at present holds a very minor position, her share in Indian trade being only 3.8 per cent in 1929-30, the latest year under study.

commerce. We have therefore included Hongkong in China, though in the Government returns the figures for China and Hongkong are recorded separately. By the way, it is, however, interesting to observe that in earlier days, the bulk of Indo-Chinese commerce passed through Hongkong. This was due to its being an open port under British possession with all the banking and shipping facilities while most of the other sea-ports under Chinese rule were closed to foreign ships. With the increase in the number of treaty ports thrown open to foreigners, Indo-Chinese trade was gradually diverted from Hongkong to the treaty ports so that at present the bulk of our commerce with China is transacted through the latter. For example, in 1892-93, out of the total of 1734 lakhs of rupees, the shares of Hongkong and the treaty ports amounted respectively to 1150 and 589 lakhs. In 1929-30, the share of the treaty ports was 1716 lakhs against only 377 lakhs of Hongkong.

The following index numbers are indicative of the relative growth of Indian exports to China and the imports therefrom :—

	Exports to China	Imports from China
1875-76	100	100
1880-81	130	131
1890-91	125	159
1900-01	103	167
1905-06	187	116
1910-11	168	160
1915-16	83	214
1920-21	134	357
1925-26	168	227
1929-30	140	317

Three broad stages in the relative progress of exports and imports can be noted from the above figures.

- (i) During the period 1875-76 to 1900-01, the exports from India showed little development while the imports from China rose appreciably in value.
- (ii) Between 1900-01 and 1905-06, there was a marked rise in exports but the imports showed a positive decline.
- (iii) Since then, the exports of Indian goods have fallen heavily, showing wide fluctuations while the imports from China have once again grown in volume.

On the whole, the imports from China, though still amounting to only a fraction of the exports sent thereto, have nevertheless shown some considerable expansion; but the exports have practically shown no expansion since the eighties of the last century.

## II

In 1875-76, the imports from China were valued at Rs. 152 lakhs; and though amounting barely to 5 per cent of those from the United Kingdom, these were greater than those from any other

country. Except during the year 1888-89 when the imports from the Straits Settlements were slightly higher, China continued to occupy this second position till 1895-96 when the imports amounted to Rs. 281 lakhs. The next year she was relegated to the fourth place, and in the course of the subsequent nine years, she went down to the ninth. Two causes combined to bring about this decline of China as a supplier of goods to India. On the one hand, the imports were declining after 1895-96 and were reduced to only Rs. 149 lakhs in 1906-07; on the other hand, the imports from other foreign countries which had been quite small so long were now exceeding those from China. The reduction of the imports during the period 1895-96 to 1906-07 was due to an all-round decline in the imports of Chinese goods which were affected by internal disorders in that country and competition from others. Subsequent to 1906-07, there was some recovery, and especially during the War and the two boom years that followed it, the imports showed considerable progress, reaching in 1919-20 the record value of Rs. 661 lakhs. With the return of normal conditions, they fell year after year till they amounted to Rs. 345 lakhs in 1925-26. Since then, due mainly to the rising imports of cotton goods, there has been a rise in the total imports from China which represented Rs. 483 lakhs in 1929-30.

Silk and silk manufactures have all along represented the bulk of our imports from China and amount to about 50 per cent of the total. Two other articles of minor importance are sugar and tea. The imports of sugar once represented a fair volume, being valued at more than Rs. 50 lakhs in 1892-93. With the rise of the great sugar-exporting countries like Java, the imports from China have fallen off rapidly and were worth Rs. 10 lakhs only in 1929-30. As for tea, India herself is its greatest exporter; the small quantities of Chinese tea (these amounted to about Rs. 20 lakhs in 1929-30) as are imported into India go to satisfy the demand which exists for this variety. Cotton manufactures, consisting mainly of yarn, are an important recent addition to

the articles of import from China. The following figures are illustrative of the rise in the imports of cotton goods from China :—

	Piece-goods in millions of yards	Yarn in millions of lbs.
1920-21	1	...
1926-27	2	1
1927-28	7	13
1928-29	13	11
1929-30	10	10

Thus the imports of cotton goods from China which barely amounted to a little more than a lakh of rupees in the pre-war period were valued at Rs. 139 lakhs representing about 29 per cent of the total imports from that country in 1929-30. In yarn, the imports from China now amount to about one-fourth of our total imports. This is indeed a sad feature to be noted in connection with the growth of our foreign commerce that India, which once used to export cotton yarn amounting to more than Rs. 10 crores to China should not only have completely lost that market, as we shall presently see, but should have come to import from that very country cotton yarn now amounting to more than a crore of rupees.

On the whole, silk and silk manufactures are the foremost articles of import. China has been known as a great silk-producing country from the remotest times, and though Japan has come to be a great competitor of China in foreign markets, she has continued to share the foremost place with the latter as an exporter of silk to India. It may be, however, interesting to note that though the imports of silk goods from these countries are more or less of equal value, the bulk of the Chinese imports consists of raw silk whereas that of the Japanese imports consists of silk piecegoods.

## III

In the earlier days, our exports to China consisted almost entirely of opium. Thus out of the total of Rs. 1150 lakhs in 1875-76, this single commodity represented Rs. 977 lakhs. With some development of the trade in opium, the total exports also rose to Rs. 1552 lakhs in 1879-80.

In the years following, the falling exports of opium brought about a declining trade; but the decline was not great as it was being made up to a great extent by the exports of cotton manufactures, consisting mainly of yarn, which began to be sent to China in rapidly increasing quantities simultaneously with the growth of the Indian Cotton Textile Industry. With the exports of opium declining on the one hand and those of cotton goods rising on the other, the latter exceeded the former in value for the first time in 1895-96 when these two amounted respectively to Rs. 660 and 635 lakhs. The total exports to China in that year were worth Rs. 1395 lakhs.

During the next ten years, owing to the stimulated exports of cotton manufactures, the total rose considerably in value amounting to the record of Rs. 2151 lakhs in 1905-06.

For the next ten years there was no progress because of a fall in the exports of cotton goods. During this period, though the exports of opium were declining in quantity, the rise in price kept them more or less stationary in value. In 1912-13, the total exports amounted to Rs. 2055 lakhs.

With the termination of the opium trade, the total exports at once fell to Rs. 1355 in 1913-14, and till 1918-19, they were very restricted, amounting to only Rs. 811 lakhs in the latter year.

A change took place by 1919-20. From the close of the last century, the Cotton Textile Industry was being developed in China also; and with its progress, the exports of cotton manufactures from India, which had reached the high-water mark in 1905-06 amounting to as much as Rs. 1158 lakhs, began to decline. But side by side with these diminishing exports of manufactured

cotton those of raw cotton began to grow. It was, however, from 1919-20 that the latter showed very great developments. During the last few years, another commodity has also come to be exported to China in considerable quantities, namely, rice. The result was that the total exports which had gone down to Rs. 811 lakhs in 1918-19, rose in the following years. But the decline in the exports of cotton manufactures has been so heavy (they have now practically become nil amounting to only Rs. 6 lakhs in 1929-30) that the total exports to China are as yet far below the level reached in 1905-06.

Opium, cotton goods and raw cotton have, at one time or other, represented the bulk of India's export to China. At present it is made up of raw cotton, the trade in the other two commodities having practically disappeared. The two other articles of importance are now food grains (mainly rice) and jute manufactures. Thus, in 1929-30, out of the total exports of Rs. 1610 lakhs, raw cotton represented Rs. 934 lakhs, food grains Rs. 318 lakhs, and jute manufactures Rs. 205 lakhs. The exports of opium were nil and of cotton manufactures, as already observed, nominal.

#### IV

The foregoing examination of India's import and export trade with China at once reveals the causes of the decadent nature of Indo-Chinese commerce.

As regards the articles of import, all of them are of a nature that makes them liable to keen competition from India as well as from abroad. Imports of tea could not show progress because India herself is the greatest tea-producing country. Indeed, in this branch of trade the competition from India has ousted China from foreign markets as well. In sugar, it was out of the question for a backward country like China to contest with advanced and organised rivals like Java. The imports of cotton goods during the last four years, due perhaps mainly to a combination of abnormal circumstances, have been exceptionally large; but here

also, she has got tough competitors in Japan and India herself. The remaining article which is, of course, the most important one and in which China has shown special strength is silk. Here again, Japan has cropped up as a keen rival. Half a century back, China was, by far the greatest silk-producing country in the world; to-day she has been superseded by Japan and occupies now the second position. Indeed, the Japanese competition has seriously affected the silk trade of China as a whole. In the case of India also, though she has been able to hold the field in raw silk, the imports of silk manufactures from Japan have long exceeded those from China.

The consequences of all this are well reflected in the very small imports of Chinese goods into India, these amounting to only 2 per cent of India's total imports in 1929-30. It is, however, worthy of note that, though very small, the imports have shown some development at least, whereas the exports have positively declined. This is due to the fact that there has not been any decline or change in the staple commodities of import, the dominant position of the imports of Chinese silk remaining more or less unshaken notwithstanding the keen competition from Japan.

But there has not been such a stable commodity in the export side. Indeed, the rise and fall of the two articles, opium and cotton goods, the exports of each of which had at one time amounted to more than ten crores of rupees, are unparalleled in the history of modern international commerce.

India's export trade with China in the earlier days was of a special character. It consisted almost entirely of a state monopoly in a noxious article, namely, opium the export of which, with the rise of public opinion against it, had at first to be curtailed and ultimately given up.

The case of cotton manufactures, which had come to make up for decaying opium exports and which in course of time assumed the magnitude of the latter (amounting in one year to about twelve crores of rupees) but declined subsequently so as to be reduced to



only six lakhs of rupees in the latest year under study, is quite different from that of opium. There was no State regulation or Government policy that caused the rising exports of cotton manufactures or their equally rapid fall. The growth and the collapse of these exports to China are unique phenomena in the commercial history of modern India. It was a play of the economic forces of competition that brought about the extinction of our once very flourishing yarn trade with China. The development of the Chinese Cotton Textile Industry and the severe competition from Japan combined to ruin India's export trade with that country in cotton manufactures.

If things had stopped there, we might have contented ourselves by lamenting over our misfortune. But the fact that that very country which hardly a quarter of a century back was the monopolistic market of vast dimensions for Indian cotton yarn should at present not only have altogether dispensed with it but be exporting that very article to India amounting to more than a crore of rupees leads us to think that there must be something fundamentally wrong with the Indian Cotton Textile Industry. The earlier development of this industry in Bombay in the teeth of various unfavourable circumstances was an eloquent testimony to the superior capacity of the Indian pioneers in this field. The present decadent nature of the industry in spite of the various measures of protection afforded to it, and which were never enjoyed before, does certainly point to the poorer ability of the modern organisers at the helm of it. Discounting all other factors, it does clearly indicate, we believe, that the present leaders of the industry are not the robust successors of their giant predecessors. Some drastic measures of reform in matters of internal organisation of the Industry are called for if it is not to succumb to the onslaughts of competition from every newcomer on the field.

## V

The root causes of the non-progressive Indo-Chinese trade will

further be evident from an examination of the nature of China's import and export trade. Like India, China is an industrially backward country. Her exports consist mostly of raw materials for which India has little demand and her imports consist of manufactured goods, very little of which India can supply. It is this similarity of the nature of China's foreign trade to India's that has made quick progress in Indo-Chinese trade impossible. For, trade can flourish only between those countries whose exports and imports consist of commodities of different varieties. Therefore, a country like India or China can show developments in her trade only with an industrially forward country, exchanging her raw materials with the manufactured goods of the latter. That in the earlier days Indo-Chinese trade had assumed a great bulk was due to the existence of an extraordinary article, namely, opium.

The fact that the exports from China consist of raw materials and the imports of manufactured goods, has naturally resulted in the advance of her commerce with those countries which can utilise her raw materials in developing their industries and supply her with manufactured goods, just as similar circumstances have directed our trade through similar channels. Hence, the development of China's commerce has been greatest with countries like the United Kingdom, Japan and the United States, as has also been the case with India. In this respect, the similarity between India and China is most striking.

Both India and China are densely populated countries with a vast population.

Both are industrially backward with immense agricultural resources; consequently, the foreign trade of both has consisted of exports of raw materials chiefly and imports of manufactured articles.

In the case of both, cotton manufactures are the overwhelmingly dominant article of import.

Owing to the very similar trend in the growth of these two countries' trade, its direction in relation to the different countries

has also been the same. The United Kingdom occupies the predominant place in the commerce of both these countries. Next comes Japan, and third is the position of the United States of America in the case of both. (It should, however, be noted that owing to her close proximity to China, Japan has been able to push the sales of her cotton manufactures and other goods to a greater extent in China than in India.)

## VI

This development of her foreign trade on the same lines as India's is also observable from the very similar position occupied by India in China's trade. Just as the share of China in India's trade has declined, in the same way India's share has also declined in the trade of others. The following figures clearly illustrate the point:—

	Total Chinese Trade in millions of Hk. Tael.	Sino-Indian Trade in millions of Hk. Tael.	Percentage share of India in Chinese Trade.	Total Indian Trade in millions of Rupees.	Indo-Chinese Trade in millions of Rupees.	Percentage share of China in Indian Trade.
1867	127.2	22.7	17.8			
1877	140.7	20.3	14.4	1066.8	141.6	13.3
1887	188.1	26.3	13.9	1555.4	155.0	10.0
1897	366.3	21.1	5.7	1712.8	139.9	8.1
1907	630.8	36.1	5.3	3141.3	173.8	5.5
1913	973.4	54.5	5.6	4403.3	162.4	3.6
1917	1012.0	33.9	3.3	4092.5	121.5	2.9
1921	1506.0	45.1	3.0	5312.6	216.3	4.1
1925	1724.0	61.6	3.5	6115.1	217.4	3.5

The following index numbers are further illustrative of the backwardness of Indo-Chinese commerce in relation to the total trade of China:—

	Total trade of China	Indo-Chinese trade
1875	100	100
1880	115	130
1890	156	129
1900	270	110
1905	473	178
1910	617	167
1915	638	99
1920	950	160
1925	1261	167

It will thus be seen that the non-progressive character of Indo-Chinese trade is not a reflex of that of the total trade of China. On the contrary, China's total trade has shown even quicker developments than that of India the share of which has equally declined in China's foreign commerce as the latter's has declined in India's.

## VII

From what has happened in the past, we cannot expect any remarkable development in Indo-Chinese trade. As has already been pointed out, the similar nature of the foreign trade of the two countries makes such a thing impossible. An examination of the principal commodities of China's international commerce will more fully indicate the scope and possibilities of Indian trade with that country.

The chief articles of export from China are silk and silk manufactures, beans, bean cake, groundnuts, tea, vegetable oils, raw cotton and coal. Except silk and silk manufactures, there is little likelihood of any other of these finding a market in India. India does not require bean and bean cakes. Of groundnuts, tea and cotton, she herself is a great exporter. Neither does she want

vegetable oils or coal, the home supply being quite ample to meet her requirements. Silk is thus the only article which can find a large market in India. But already more than half of our total silk imports comes from China. Therefore, in view of the fact that it is a costly and luxurious article the consumption of which is bound to be comparatively small especially in a poor country like India, the prospects of further expansion are limited in this sphere also. On the contrary, the imports of silk may show even a positive decline owing to the following reasons:

- (i) India herself is an important silk-producing country.
- (ii) Japan, with her better financial and industrial organisation, is a powerful rival in the field and has already captured the Indian market to a very large extent so far as silk piecegoods are concerned.
- (iii) The imports of this commodity are at present subject to a high rate of customs duty in India.

As regards the imports of cotton yarn and piecegoods from China, we are not inclined to give much importance to them in view of the intense Swadeshi movement that is prevailing at present in our country.

We can, therefore, expect only slight progress, if any at all, in our import trade with China in the future.

Now, coming to the articles of China's import trade, the chief ones are cotton manufactures, kerosene, rice, sugar, iron and steel and raw cotton. Except rice and cotton, all the other commodities are imported by India herself in large quantities. The chances of developing a large export trade in them are, therefore, remote. As regards rice, China has, for the last few years, been almost regularly importing large quantities of Indian rice, and in future also she may find it necessary to continue these imports.<sup>2</sup> But

<sup>2</sup> It should be noted in this connection that the exports of Indian rice to China come entirely from the province of Burma. If Burma is separated from India, as decided in the London Round Table Conference, then this article of our export to China will disappear.

here also the prospects are not very bright. Already the exports of foodgrains from India to China have assumed considerable dimensions. The former is as thickly populated as the latter, and the surplus that can be spared is necessarily limited. But the same is not the case with raw cotton. True, China herself is a great cotton-producing country, holding the third place among the cotton-growing countries of the world. But the important point to be noted is that she is a great importer of cotton manufactures, indeed the second greatest one in the world, being next only to India. If, therefore, China is to meet her entire home demand for cotton piecegoods by manufacturing these within the country, her home supply of the raw material will be quite insufficient and she will have to import a large amount of it from abroad. With the growth of her Cotton Textile Industry, she has already been importing large quantities of raw cotton, and along with its further progress, these imports must show a corresponding rise. Considering the fact that the Chinese people usually use coarse piecegoods, the Indian cotton is eminently suited for their purpose. China is, therefore, a possible future market of greater dimensions for our raw cotton, capable of showing a vast amount of expansion. During the last few years, these exports have rapidly grown, China occupying at present the second position among the consumers of Indian cotton. Further progress can, therefore, be easily expected in this branch of trade.

The future developments in India's export and import trade with China are, then, likely to be in the opposite direction of what these have so long been. Till now, the imports from China have moved more rapidly than the exports sent thereto. But, from what has been explained above, the latter are henceforward likely to grow at a quicker pace than the former. At the same time it should not, however, be lost sight of that, on the whole, Indo-Chinese trade can but advance slowly. Rapid progress is possible only when there is a diversity in the articles of trade. Moreover, it could not develop freely if it all went one way. Our

trade with China is more or less one-sided, and there are only two or three commodities in which there can be any growing trade. Therefore, in view of the limited spheres of activity, there is, at least in the near future, no possibility of China's rising much in relative importance among the countries trading with India and occupying the place of eminence which she once did at the beginning of the period under study.

# THE THEORY OF INCREASING RETURNS UNDER COMPETITIVE CONDITIONS

BY

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The problem of Increasing Returns relates to the long period, and the present study will be confined, therefore, to conditions of long-period equilibrium.<sup>1</sup> We shall examine if the prevalence of increasing returns in an industry is compatible with competitive equilibrium.

A few points should be noted at the outset. In the first place, the problem of increasing returns will be studied not as they appear throughout the process of equilibrium, but as they do *at the point of equilibrium*. In the second place, this point of equilibrium will be one of what we may call *relative equilibrium*, (that is to say, an equilibrium in relation to a particular industry and in relation to a particular scheme of the initial distribution of resources) and not one of *absolute equilibrium*, or *the general equilibrium* of the industrial system as a whole; for the latter is so abstract and so complex that any study of it may only be 'light-bearing' but not 'fruit-bearing.' In the next place, we shall

<sup>1</sup> Marshall writes,—". . . a tendency to increasing return does not exist generally for short periods." (Principles, 7th Edition, App. H, p. 805.) Elsewhere, ". . . we expect the short-period supply price to increase with increasing output." (*Ibid.*, p. 460.) But though increasing returns are essentially a long-period phenomenon, it cannot be denied that a sudden increase of demand may sometimes lead to a diminishing cost. The result, in fact, depends upon the initial state of things. If the initial position is such that a particular factor is *under-utilized*, an increase of the size of a firm or an industry owing to an increase of demand may give rise to increasing returns even in the short period.



here study the condition of a dynamic or rather a biological equilibrium, and not that of a static equilibrium, so that the forces making for the equilibrium will themselves be assumed to be in motion. In view of such a nature of our equilibrium, the medium for the study of our problem will be the Representative Firm, a firm which typifies the supply curve of the industry to which it belongs.

The problem of Increasing Returns under competitive conditions has been engaging the attention of analytical economists for some time. The discussion was started by Mr. Piero Sraffa who, in the course of an article on 'The Laws of Returns under Competitive Conditions'<sup>2</sup> argued that the laws of Diminishing Returns and Increasing Returns cannot operate in a competitive equilibrium.<sup>3</sup> What he says about diminishing returns is, of course, beyond dispute. In so far as all the factors of production are elastic in supply in the long period, the rate of returns cannot be diminishing with an increase in the scale of production. The real trouble is with regard to the opposite tendency,—the tendency to increasing returns with which the present paper is concerned. Mr. Sraffa dismisses increasing returns derived from purely external economies and purely internal economies, as altogether incompatible with competitive conditions. So far as they are derived from external economies merely, he says, their operation is obviously

<sup>2</sup> Published in the *Economic Journal*, December, 1926.

<sup>3</sup> A sceptical view on the laws of returns was expressed much earlier by Mr. Clapham. (*Economic Journal*, September, 1922—a paper 'On Empty Economic Boxes.') But Mr. Clapham did not go so far as to deny the reality of the concepts. He only questioned the practicability of boxing a particular industry with a particular docket. We have, indeed, to examine each particular case and see to what law it conforms. But that requires a realistic study and is beyond the province of analytical economists. A theoretical study of the problem is not, however, fruitless; for it serves as a complement to a realistic study. Economists unaided cannot fill their empty boxes because they lack the necessary realistic knowledge; and businessmen unaided cannot fill them because they do not know where and what the boxes are. With collaboration, however, it is not unreasonable to hope that some measure of success may eventually be achieved." Pigou, *Economics of Welfare*, p. 229.

impossible at the point of the particular equilibrium of an industry, where, according to hypothesis, no economies of this sort are present. And so far as increasing returns are due to internal economies, they cannot, according to him, operate at the point of equilibrium; for, so long as production is carried on under individual increasing returns (owing to the existence of internal economies) each firm is expected to go on increasing output; and the logical conclusion may be that production concentrates in the hands of a single firm having a better start, and competition ceases to exist. If, however, the nature of economies is such that they are external from the point of view of the individual firms, but internal from the point of view of the industry as a whole, they may co-exist with competitive equilibrium. But these economies are ruled out by Mr. Sraffa on the ground that they "are not likely to be called forth by small increases in production." The supply curve of a particular industry in competitive equilibrium, according to Mr. Sraffa, therefore, represents conditions of Constant Returns. Thus he observes that the prevalence of constant returns is due to "the absence of causes which tend to cause the cost either to increase or diminish," and not, as the mathematical economists would have it, "from the balancing of two opposite tendencies to diminution of cost . . . and the tendency to increase of cost."<sup>4</sup>

Prof. Pigou in a note on the same problem associates himself with Mr. Sraffa in the latter's remarks on internal economies. "The Representative Firm" he observes, "must be conceived as one for which under competitive conditions, there is, at each scale of aggregate output, a certain optimum size, trespass beyond which yields no further internal economies."<sup>5</sup> But he suggests that an increase in the scale of production may open up external economies in the industry sufficient to insure increasing returns.

<sup>4</sup> *Economic Journal*, September 1926.

<sup>5</sup> *Economic Journal*, June 1927.

What signifies, he says, is not the absolute size of the increase of external economies that correspond to a given addition to the scale of output, but "the ratio between the increase expressed as a proportion of previously existing costs and the increase of output expressed as a proportion of previously existing output"; and though both of these variables may be of the second order of smalls, their ratio may be of the first order.

In a subsequent analysis, however, he concedes that even internal economies, so far as they are derived from an increase in the scale of the industry may contribute to the prevalence of increasing returns.

"The increased specialisation of its component firms made possible by an enlargement in an industry as a whole, often involves a large reduction in costs."<sup>6</sup> Allan Young also draws attention to this derivative nature of internal economies in his presidential address before section F of the British Association.<sup>7</sup> As he observes, the growth of production due to an extension of the market results in an extension of "the division of labour among industries" so that the internal economies of the representative firm "dissolves into the internal and external economies of the more highly specialised undertakings"; and this process brings in new economies which manifest themselves in increasing returns. This, Mr. Shove thinks, creates a difficulty in the identification of the representative firm and in using it as a medium for explaining increasing returns.<sup>8</sup> But as a matter of fact, a re-organisation of this kind leads to a diversification of industries, that is to say, a splitting up of one industry into many more specialised industries; and what is required, after such a differentiation has occurred, is to locate a representative firm for each of these related but different industries. We have, for instance, to look for a representative firm in the spinning industry,

<sup>6</sup> *Economic Journal*, June 1928, p. 252.

<sup>7</sup> *Ibid.*, December 1928.

<sup>8</sup> *Ibid.*, March 1930, p. 115.

one for the weaving industry, and a third for the dyeing industry, it, as in Mr. Robertson's illustration, the spinning-cum-weaving-cum-dyeing industry breaks up into separate units for spinning, weaving and dyeing.

We have seen that Mr. Sraffa denies absolutely the compatibility of increasing returns with competitive conditions, and Prof. Pigou reconciles the two assumptions with the help of external economies and those internal economies that are opened up through an expansion of the industry. According to Prof. Pigou, therefore, apart from external economies and the type of internal economies referred to, equilibrium is established at a point at which the marginal cost of the representative firm coincides with its average cost,—a point, that is to say, at which production is carried on under diminishing marginal returns.

Mr. Robertson, on the other hand, goes on to suggest that there is scope even for internal economies pure and simple to bring about increasing returns in equilibrium conditions. The reason why the potentiality of increasing returns does not lead to the concentration of production in the hands of a single firm is that any individual firm is like a "water-drop" . . . forming part of a "wave," . . . "having no identifiable entity with continuing will and purpose of its own, which has both the power and inducement to expand its output."<sup>9</sup> The idea seems to be that as the individual firms have no continuity of existence, the representative firm of to-day may be replaced by a new firm a few years hence; so that though it is possible, for example, for a representative firm to-day to enjoy internal economies by increasing output, yet, by the time it increases output, circumstances may change and it may cease to be representative.

The analysis of Mr. Shove<sup>10</sup> which is made with a new device also leads to the same conclusion. In the hands of Mr. Shove the

<sup>9</sup> *Economic Journal*, March 1930, p. 88.

<sup>10</sup> See his discussion on 'The Representative Firm and Increasing Returns,' *Economic Journal*, March 1930.

concepts of internal and external economies have been further refined. He distinguishes between economies which result from an increase in the output of an individual firm, the total output remaining constant, and economies which result from an increase in the output of an individual firm, the output of the other component firms remaining constant. The former economies he calls 'economies of individual expansion' and the latter he calls 'economies of large-scale industry.'<sup>11</sup> He then makes use of these new instruments in explaining how even the so-called internal economies can coexist with competitive equilibrium.

Internal economies, so far as they are economies of individual expansion, may be positive at the point of equilibrium; yet there is no profitable scope for the representative firm to increase its output because of difficulties in *marketing*. As, according to hypothesis this increase in the output of the firm is at the expense of other component firms, our firm has got to invade foreign markets for the disposal of additional commodities. This involves additional costs, viz., cost of transport, cost of advertisement and so on, and these 'diseconomies' may more than offset the economies of individual expansion. In case the cost of marketing is negligible, or at least less than the economy of individual expansion, the difficulty in the way of concentration of output in a single firm comes from the element of time. Expansion takes time, and during the expansion-interval the luck or efficiency of the firm may decline, so that the expansion ceases to be profitable.

<sup>11</sup> Prof. Pigou's classification of the marginal cost of a firm into 'Marginal substitute cost' and 'marginal additive cost' was also introduced to indicate a similar distinction. What he calls 'marginal substitute cost' refers to the cost of that marginal increment of the output of a firm which is accompanied by a corresponding contraction of output on the part of other component firms; and what he calls 'marginal additive cost' refers to the cost of a marginal increment of the output of a firm which is not accompanied by any alteration in the output of others firms. (See 'An Analysis of Supply': *Economic Journal*, June 1928, p. 242.) But Prof. Pigou did not pursue his analysis on this line on the ground that in a many-firm industry when the output of a particular firm is small relatively to the industry these two costs are not likely to differ substantially.

Now, these possibilities were in fact anticipated long ago by Alfred Marshall himself, and he solves the difficulty in exactly the same way. Thus he writes: “. . . if there were no other difficulty in the way of the unlimited expansion of a strong manufacturing business, each step that the firm took forward in supplanting its rivals,<sup>12</sup> would enable it to produce profitably to itself at prices below those which they could reach. That is, each step would make the step surer, longer and quicker: so that ere long it would have no rivals left, at all events in its own neighbourhood. That condition must of course not be omitted; because the expense of marketing heavy goods at a distance might overbear the economies of large-scale production. But for goods, of which the cost of transport is low, and which are under the law of Increasing Return, there might have seemed to be nothing to prevent the concentration in the hands of a single firm of the whole production of the world, except in so far as it was closed by tariff barriers. *The reason why this result did not follow was simply that no firm ever had a sufficiently long life of unabated energy and power of initiative for the purpose.*”<sup>13</sup>

It is this latter point that Mr. Robertson tries to emphasise while he introduces his analogy of ‘water-drops’ and ‘wave.’ Marshall’s metaphor of ‘trees in a forest’ is also introduced just to show this nature of organic growth of firms in an industry.

As a matter of fact Marshall does not conceive of internal and external economies as independent and unrelated forces making for increasing returns. On the other hand, he suggests that there is a sort of inter-relation between internal and external economies. It is here that biology comes to our aid. In the field of biology we find that living beings influence and at the same time are influenced by their environment. On the one hand the development of an organism is the result of a reaction to stimulus from

<sup>12</sup> Here obviously he has in mind the phenomenon of individual expansion.

<sup>13</sup> Industry and Trade, pp. 315-16. Italics are mine. Cf. also Principles of Economics (7th Edition), pp. 808-09.

the external environment; on the other hand the organisms themselves through the path of evolution continue to mould the environment in their endeavour to attain higher forms of life. Similarly the individual firms do grow under external stimulus, that is to say, they are influenced by the condition of the industry to which they belong; but in the process of development they in their turn influence the environmental conditions. In other words, there is a process of action and reaction between the industry and its component firms, between external and internal economies.

The analogy may be pushed further: The process of evolution is such that organisms always endeavour to secure a greater and greater adaptation to their environment and this process continues until a perfect equilibrium is established between the creatures and their environment. In the same way individual firms tend to approximate to the conditions of the industry, until in the long run a perfect equilibrium between the firms and the industry is established. That firm which can perfectly adapt itself to the conditions of the industry is the Representative Firm; so that the long-period tendency is for all firms within a particular industry to approximate to the conditions of the representative firm. Here is the clue to the theory that the cost of the representative firm tends to indicate normal values, the representative firm being thus conceived as a long-period average firm,—average in the sense in which it is used in statistics,—a *type*, and not merely a mathematical average.

The recent analysis on the problem of increasing returns thus goes to show that a relative equilibrium, as defined above, can take place at a point where the average cost of the representative firm is higher than the marginal cost, and where there is scope for both external and internal economies giving rise to increasing returns. As a matter of fact there is no reason why such a situation should be improbable. We must remember that equilibrium is the result of a balance between the forces of supply and demand, whether we refer to the individual producer's supply curve as coupled with the

particular demand curve of his own market' (as in the case of a representative firm) or to the general supply curve as coupled with the general demand curve (as in the case of the industry as a whole). Although, therefore, the supply price of the representative firm at the position of equilibrium may be diminishing, the demand price may be still more diminishing, so that any expansion of output ceases to be profitable. In view of this we find that the optimum size of the representative firm is not that size "trespass beyond which yields no further internal economies," but rather that size trespass beyond which is not *profitable* under certain given conditions of demand. Prof. Pigou argues that under competitive conditions the equilibrium firm—to use his own terminology—can profitably increase output to some extent beyond the point of intersection of the demand and supply curves, provided, of course, its own output forms a very small part of the total output of the industry; for, in that case, the price in the market is approximately unaltered by an expansion on the part of the equilibrium firm which can, therefore, expand output and still sell at approximately the old price.<sup>14</sup> But, there may not be only one firm representing the industry. If there are more than one firm of a representative type, any increment in the supply of the representative firms may affect the total supply to such an appreciable extent as to alter the demand price of the market.<sup>15</sup>

By an extension of the above argument it can be shown that the greater the elasticity of demand the larger is the scope for expansion on the part of the representative firm. Now, the elasticity of demand for a commodity is not an independent variable. It is indirectly affected by the supply of the commodity. The

<sup>14</sup> *Economic Journal*, June 1928, p. 255n.

<sup>15</sup> It must be noted further that if an expansion of the representative firm is not followed by a corresponding expansion on the part of other firms, it loses its representative character.



reason is that as the conditions become favourable for the production of a particular commodity and its aggregate supply increases, the demand for other commodities increases through the first commodity (for the demand for any commodity is derived from other commodities). This increase in the demand for other commodities offers scope for the expansion of their output, and this again reacts on the elasticity of demand for the first commodity. This process may have its full play if the extent of the market is sufficiently wide. Thus Allan Young suggests that economies of large-scale production through roundabout methods depend upon the extent of the market, and attributes the efficiency of American industries above all to the extent of the American market. This principle, it must be noted, is of fundamental importance for India which provides a very extensive market, and where, therefore, there is a large scope for a profitable expansion of industries.<sup>16</sup>

<sup>16</sup> A paper read at a meeting of the Dacca University Economic Association on the 19th January, 1931.

# THE REMONETISATION OF SILVER

BY

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Propounded by the great banker Mr. J. F. Darling, this idea of restoring silver as the metallic standard in the Eastern countries, viz., China, India, Sudan and Arabia, is becoming a fashionable recipe for solving the present-day world-wide trade depression.<sup>1</sup> If the Eastern agricultural masses were to regain their purchasing power which they would by the selecting of silver as their standard monetary metal and thus increase the value of their silver hoards the Western manufacturing nations would find a market for their products. Mutual prosperity would result out of this step. Thus viewed, this proposal is merely a repetition of what happened in the United States of America immediately after the Civil War. To prevent the commodity prices from falling lower, silver dollars were added to the circulation as a result of the persistent agitation on the part of the silver interests. Currency history is only tending to repeat itself.

Secondly, the present-day distribution of the world's gold is faulty. The United States of America and France<sup>2</sup> are possessing

<sup>1</sup> See Lord Brabourne's Speech, Annual Meeting of the Consolidated Gold Fields of South Africa, Reported in the *Statesman*, 29th December, 1930.

See also Senator Pittman's Speech at Washington of 25th November, 1930, quoted in the *Liberty*, 21st December, 1930.

<sup>2</sup> France receives gold as a result of the fact that she receives far more from the reparations payment than what she pays to foreign countries. This theory accounts satisfactorily for the increase in gold as well as steady short-term foreign balances which are not converted into long-term capital investments and are being used in short-term money markets. These are tending to act as a drag on the stability of the international monetary situation. See the *Statist*, September 6th, 1930.

the bulk of the world's gold stock. They are fast becoming a bottomless sink of the precious metal—gold. Though the inward flow of gold back from America into the European monetary systems becomes discernible since 1927-1928, this movement is not a very perceptible one and the ideal distribution of gold which ought to follow the well-known law of the Territorial Distribution of Precious metals is becoming impossible under such conditions. The credit system of the different countries of the world cannot therefore be based on gold which is becoming rarer as a result of the diminished output of gold from the mines and its being locked up or selfishly impounded in the banking systems of these two countries. Sound international credit conditions cannot ensue as a result of these twin problems concerning the world's gold stock.<sup>3</sup> If international bimetallism were to be adopted world-wide credit disturbances need not be apprehended.

Nextly, the token silver coins which were used extensively in Great Britain, France and the Continental<sup>4</sup> countries in the pre-war days have been given up. Becoming habituated to paper substitutes during the war-time they have given up the minting of silver as a subsidiary metal in their present-day composite monetary standard. Unless this practice is also revived and the monetary demand added to the pure industrial demand for silver, the value of silver would not rise to a substantial level—profitable enough to continue silver production on a large scale.<sup>5</sup>

The dumping of silver by the different governments is responsible for the unduly low price of silver or the phenomenon of lower

<sup>3</sup> See Sir Henry Strakosch, The London Economist Special Memorandum, dated 5th July, 1930, entitled "Gold and the Price-Level."

See also the Interim Report of the Financial Committee of the League of Nations, enquiring into the problem of "Gold and the Prices."

<sup>4</sup> About 66,000,000 oz. of silver coins were demonetised by France and Belgium. See Senator Pittman's Speech.

<sup>5</sup> At one time the price of one oz. of silver was about 125 cents and it has now dropped to 33 cents per oz. In order to make it remunerative the suggestion of Lord Brabourne is to raise the price of silver to 2s. an oz.

prices in spite of diminishing output of silver. The silver interests of the United States of America, who are still a power in politics, are already vigorously protesting against this unwarranted interference with the price of silver. It is indeed curious that the suggestion of selling silver by means of open tender has not been adopted although about 46,000,000 oz. of Indian silver were sold by the Government of India. This low price of silver is considered to be the main cause of lowered trade with China and the East. It is, however, forgotten that even the Western countries lack the real purchasing power as the incubus of the war debts weighs heavily on them.<sup>6</sup>

Academically speaking the proposal is based on sound reasoning. But the present-day world is tired of novel monetary plans. Conscious of the fact that no commodity standard, be it gold or silver, can give us an unvarying price-level, people have been looking to banking policies as their saviour in this particular direction. International Central banking co-operation would become impossible if the world is divided into the East and the West, the former using gold, the latter using silver as their standard monetary metals. The complications, to which foreign commerce between the two groups possessing independent currencies would be subjected, would be important obstacles of no mean character. Besides these difficulties it would not constitute a permanent currency reform.

It is not by this monetary remedy alone that the present-day world-wide trade depression can be solved. A revivification of the purchasing power would stimulate effective demand but there is a remarkable lag between the fall in agricultural prices and the

<sup>6</sup> See Mr. Goodenough's scheme for the International settlement of War Debts. The United States of America sends a full third of its exports to Europe and this lack of purchasing power is no less responsible for trade depression in the U.S.A., than the lack of ability on the part of the Eastern countries to consume American goods.

fall in the prices of manufactured commodities.<sup>7</sup> While bountiful nature tended to reduce the prices of agricultural commodities in almost all the countries as a result of the surfeit of these good things, the labour organisations of the wide-awake economic systems have refused to be content with lowered wages.<sup>8</sup> As no assault on the earnings of the wage-earners has taken place no pronounced reduction in the cost of production of manufactured products has resulted. Unless attention is drawn towards improvements in this direction, the mere increasing of the purchasing power is no solution. The elasticity of business and industrial factors<sup>9</sup> is totally lacking with the result that there is no proper adjustment to the low level of the commodity prices brought about by lesser purchasing power and previous overbuying of the manufactured articles, which were sold with ease in the past few years. The consumers are "suffering from a severe attack of indigestion" and unless this demand is exercised once again the industrial depression will not pass.<sup>10</sup> While the world population has increased slowly, the output of prime commodities and manufactured commodities has increased greatly bringing about this inevitable slump and business depression.

7 The prices of raw materials and foodstuffs have fallen by about 30 per cent while that of manufactured exports by 20 per cent, the cost of living by 11 per cent and the money wage by less than two per cent.—See the Report of the Business Conditions in the United Kingdom, October 20, 1930, Memorandum No. 25 of the Royal Economic Society, p. 3. The case is not different with the other important countries of the world. See the *Statist*, September 6th, 1930, Article entitled "Trade and World Harvests."

8 Look at the recent German Strike in the Berlin Metal Industry as a result of the refusal of the Trade Union to accept the official arbitrator's award. See the *Statist*, October 25th, 1930, p. 568.

9 There is no attempt to revise wage-scales downwards nor lower the gap between the wholesale and retail prices. These factors are responsible for the economic sickness which has been affecting most of the countries of the world.

10 See the Business Letter of the Canadian Economic Service, McMaster University, Hamilton, Ontario, October 10th, 1930.

The tariff nuisance is no less a menace and the free movement of commodities is being hampered in all countries despite the pious and ineffective resolutions of the World-Economic Conference convened in Geneva by the League of Nations in 1927. The Smoot-Hawley Tariff precludes the other countries from purchasing the cheap and versatile American goods. It is only just recently that tariff truce negotiations have been completed to facilitate mutual trading relations between Belgium, Luxemburg, Denmark, the Netherlands, Norway and Sweden.<sup>11</sup> These protective tariffs generally make it impossible for foreign countries to find markets for their exports. It is now becoming apparent that world prosperity cannot be built under such conditions.

World-wide economic stability cannot be secured by this single monetary reform—the resuscitation of silver as a monetary metal in the East. In so far as it concentrates our attention on the concurrent gold output and distribution problems it does some indirect service. But unless all the countries adopt the same monetary gauge, *i.e.*, gold as a standard metal there would be no unifying element and exchange operations would be rendered difficult by this reform. Mischievous consequences fraught with great danger might arise. Changes in the market price of silver would add to the risks of foreign commerce. It would degenerate to mere gambling as the moving parity might cause at one time excessive activity in the home trade and excessive activity in the foreign trade at other times. These fluctuations would be erratic and cannot be anticipated by any rational processes of reasoning. Hence international trade would be greatly hindered. It is for this reason that though silver is used for internal purposes gold is selected for external payment purposes by the silver-using countries.

Again there is a faulty assumption that silver production would be on the increase to such an extent as to satisfy the pro-

<sup>11</sup> See the *Statesman*, Letter of the Oslo Correspondent, published on December 24, 1930.

posed increased monetary demand. It is the opinion of experts that new silver from the mines of Australia and the United States of America would dwindle and that the supply of silver would fall off in the near future unless it is to be counterbalanced largely by increase output from the Mexican mines which have so far been only partially exploited.<sup>12</sup> During the recent war-times and the disturbed political conditions ensuing in Mexico the silver mines became an uncertain factor with the result that the price of silver rose to an unprecedented height. It caused grave danger to the Indian monetary system which could only be solved by the timely action of the United States of America in passing the famous Pittman's Act to satisfy our demand for silver to the extent of 350 million dollars. Will not similar conditions ensue if India and the Eastern countries were once again to mint silver furiously to satisfy monetary demand?

Silver apparently has no monetary future. Silver rupees are fast returning to the Government Treasuries in various parts of several of our provinces. This tendency shows unmistakably that our people dislike the silver rupee as pocket money.<sup>13</sup> Only in the remote interior does the silver rupee hold its fascination on the rural masses. In almost all the bigger centres and trading marts, the merchants and businessmen are making an increasing use of the Government facilities for remittance provided through treasuries and currency offices.

Even in Iraq the Arab is now holding gold and the proposed new currency (December 1930) as in the case of Palestine is more or less a gold-exchange standard with internal currency based on

<sup>12</sup> The production of silver as a by-product of lead and other mines has also to be reckoned in these calculations. Improvements in mining may also tend to increase the output of silver from the mines. But the production of silver was materially reduced in each month of 1930 bringing about, unfortunately no increase in the price of silver.

<sup>13</sup> See the Annual Report of the Controller of Currency, 1928-1929. The average active circulation of notes has increased by nine crores during this year.

sterling. The Turkish Gold Lira has already risen by one rupee as the Arab is buying up gold.<sup>14</sup>

It is not only in the East that the popularity of silver as a form of money is waning. When the Federal Government of the United States of America attempted to coin silver into 271 million dollars in 1921 and force them into the circulation, the people did not respond nor show any genuine preference for them.<sup>15</sup> It is attempting to eliminate the silver dollar and certificate from the monetary system altogether and keep it as purely subsidiary metal for small change and circulation purposes. General demonetisation and falling prices are inevitable so far as silver is considered for both in France and Germany bank notes of smaller size are being increasingly used in place of specie.<sup>16</sup> The old irredeemable five franc silver pieces are no longer the monetary standard in France. This old limping standard has given way to the new gold franc and the gold bullion standard system has been adopted in 1928. Thus there is a continual demonetisation of silver all over the world. The silver standard is fast becoming a barbarous relic. The economic disaster such as the present world-wide industrial trade slump might have been aggravated by the narrowing of the basis of credit but it is not the sole cause and although "cheap and easy" money is being intentionally maintained by the banking policies of some of the advanced countries

<sup>14</sup> Quoted from the *Statesman* Bagdad Correspondent's letter, dated December 11, 1930, published on December 24, 1930.

<sup>15</sup> See G. W. Dowrie's *American Banking and Monetary Policies*, p. 300. It could not but be so, for, from 1918 the monetary policy was to substitute small Federal Reserve notes for the silver certificates in one and two-dollar denominations. The attempt is to completely retire silver dollars and silver certificates from monetary circulation.

<sup>16</sup> See the Interim Report of the League of Nations on "Gold and Level of Prices." It recommends that the extended use of cheques and smaller bank notes should be given up and in their place subsidiary coins should be used or else the demand for gold as the basis of credit would not be lessened.



yet there is no immediate recovery even in these countries pursuing this policy.

The adoption of silver monometallism by the Eastern countries would make them flounder considerably before they can perfect their banking and monetary policies. There is a distinct trend all over the world to give up the metallic currency, be it gold or silver, even though the gold standard in one or other of its varied forms is being adopted. The use of paper as internal currency is on the increase. This is the case in almost all the Eastern countries, except in China, which begins to hoard silver as soon as political conditions destroy the confidence of the masses in the note-issues. It would be a retrograde measure if these Eastern countries were to give up this useful habit as a result of this suggestion and accept silver monometallism with silver coins in circulation as the accepted feature of their monetary organisation.

One of the best solutions of the world-wide trade depression is to forcibly lower the long-term market rates of interest to the old pre-war level. Prof. Keynes rightly points out that "to the Economic historian of the future the slump of 1930 may present itself as the death struggle of the post-war rates of interest and the re-emergence of the pre-war rates."<sup>17</sup> The market rate of interest is no doubt falling but not fast enough to catch up the natural rate of interest. Hence there is recurrent profit deflation leading to recurrent income deflation and a sagging price-level. So the banking systems should influence the market rates of interest and induce the belief that low short-term rates of interest would tend to prevail for a long time. This can be done by lowering the deposit rate of interest in both countries, viz., Great Britain and the United States of America to half per cent. International Central Banking Cooperation should have as its main plank of reform, the maintenance of low short-term market rates of interest by means of bank rate policy and the open market operations. It is by these

<sup>17</sup> See J. M. Keynes, *Treatise on Money*, Vol. II, p. 384.

methods the rate of investment has to be controlled and through it the level of prices. Any other mistaken policy is bound to sap "the very foundations of capitalist society" says Prof. Keynes, who has unfortunately been playing the rôle of Cassandra for the last eleven years. But the political uncertainties create an air of tension and the psychological confidence required on the part of the capitalists to make long-term investments is not forthcoming. Hence it is likely that capital resources will be allowed to lie idle in the short-term money markets. Thus this banking policy also is bound to be sterile so long as this confidence is not generated.<sup>18</sup>

For the various reasons cited already it is impolitic to give up the wise policy enunciated by the Hilton-Young Commission. An international agreement to use silver for monetary purposes on the part of the different countries would be a backward step. All that can be done to pacify the silver interests is to arrange for a more judicious way of disposing off the unwanted silver by the respective Governments by means of making them accept the open tender system for the sale of silver so that the industrial requirements might be satisfied in this manner. This would prevent silver touching rock-bottom prices in the near future.

India, once, had the opportunity to give up the silver standard and return to the gold standard during the recent war-time. It was sadly neglected and as a result of the flooding of the market with silver the present-day misfortunes are being experienced. We cannot hope to extricate ourselves out of this impasse by following a policy of wait and see or by accepting the proposal for the remonetisation of silver.

<sup>18</sup> The Federal Reserve Banking system is steadily pursuing the policy of creating "easy money" conditions during the first and second half of 1930. The recent report issued by the Harvard Economic Society shows that the stage has been set already for a financial recovery but the needed internal adjustments in business have not been taking place and there is no recovery of trade and industry even in the United States of America. See the Memoranda of the Royal Economic Society, Nos. 22 and 25.

Even granted that an international agreement for the increased use of silver as monetary metal is brought about and the vested interests of the United States of America were to succeed in raising the price to such a level as to wipe off the difference between the nominal and bullion value of the coin the Government of India can safely issue the one-rupee notes as a valuable expedient to tide over such contingency. Any further increase in the use of silver for our internal currency purposes would be postponing for ever the sound currency plan adopted by the Hilton-Young Commission and partially carried out by the Government of India.

# Announcements

## INTERNATIONAL CONGRESS FOR STUDIES REGARDING POPULATION

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Organized by the Italian Committee for the study of population problems an *International Congress for studies regarding population* will be held in Rome from 7th to 10th of September next.

His Excellency the Head of the Government, Benito Mussolini, has accepted the honorary Chairmanship of the Congress, while the effective Chairmanship is entrusted to Prof. Corrado Gini, President of the aforesaid Italian Committee.

The organization of the Congress will include :

(a) An Honorary Committee ;

(b) An International Committee of Patronage, composed of presidents and representatives of National Scientific Organizations for the study of population problems and other personalities who will be entrusted with the propaganda for the Congress in their own countries and with the relations between the Organizing Committee and those engaged in these studies in the respective associations ;

(c) An Organizing Committee, composed of Italian Members who will be entrusted with the organization of the Congress and will be responsible for the acceptance of communications.

The programme of the Congress is purely scientific, so that any political, moral or religious propaganda whatever is forbidden, even if questions concerning the problems of population are involved.

For the distribution of the scientific papers the Congress will consist of the following Sections :

Biology and Eugenics—Anthropology and Geography—Hygiene and Medicine—Demography—Economy—Sociology—History—Methodology.

Each meeting will be presided over in turn by specialists belonging to different nationalities.

The Congress will be open to the public.

All taking part in the Congress will be entitled to send communications of which the final text must reach the Organizing Committee before 1st July 1931.

In order to draw up the programme of the Congress it would be advisable however to send to the Organizing Committee, as soon as possible, the subjects of the communications with a short statement of their contents.

Some subjects of special importance, chosen by the Organizing Committee, will be the object of reports by personalities previously nominated and will be submitted to the discussion of the Sections.

The subjects so far proposed for the reports are given below.

Those who would like to suggest subjects for other reports are asked to send their proposals to the Organizing Committee as soon as possible.

The fee entitling to take part in the Congress and to receive a copy of the Proceedings is L. 50 (fifty lire) for all those invited, whether individually, or through National Scientific Committees or Associations, and of L. 100 (one hundred lire) for others taking part in the Congress.

In March a more detailed programme will be distributed, containing the titles of the reports together with the names of the reporters and of the Members of the Honorary Committee, the International Committee of Patronage and the Organizing Committee.

**All those who take an interest in the Congress and would like to receive the detailed programme, which will be issued in March, are invited to apply to the "Comitato Italiano per lo studio dei Problemi della Popolazione"—10, Via delle Terme di Diocleziano, Roma (Italia).**

# SUBJECTS PROPOSED FOR REPORTS TO BE PRESENTED TO THE INTERNATIONAL CONGRESS FOR STUDIES REGARDING POPULATION

ROME 7-10 SEPTEMBER 1931.

*The assignment of the Reports to various Sections is only provisional.*

*For the discussion of some Reports two or more Sections may meet together.*

## SECT. 1.—*Biology and Eugenics.*

1. Biological factors of a declining birth-rate.
2. Sterility.
3. The frequency of plural conceptions in women.
4. Demographical and genetical effects of consanguinity.
5. The nutrition level of different populations and its relation to physical and psychical characters.
6. Longevity.
7. Effects of war on the race.
8. Relations between intelligence and birth-rate.

## SECT. 2.—*Anthropology and Geography*

1. Crossings in human races.
2. Differential anthropological characters of native and immigrated populations of large towns.
3. The persistence of physical and psychical characters in the population of each territory.
4. Anthropometric inquiry on Italian soldiers.
5. Physical constitution and fertility.
6. Physical constitution and mortality.
7. Different types of rural dwellings.

## SECT. 3.—*Medicine and Hygiene.*

1. Selective character of different causes of death.
2. Possibilities of expansion of white races in glacial and tropical climates.
3. Social and biological factors of the declining death-rate.
4. Epidemics in modern times.
5. The factors of statistical increase of the death-rate for some causes of death.
6. The arrest of the decrease of the specific death-rate for some populations in recent years.

## SECT. 4.—*Demography.*

1. Differential marriage-rates for immigrated and native populations of large towns
2. Differential nuptiality of the different social classes.

3. Estimate for some populations unprovided with regular registration.
4. The bearing of infanticide and abortion on the development of population.
5. Mass emigration.
6. Interrelations between birth-rate and death-rate.
7. The decline in the population of Equatorial Africa.
8. The demography of primitive peoples.
9. Calculation of the future growth of a given population.

## SECT. 5.—*Sociology.*

1. The evolution of the family.
2. Differential birth-rates for the different religions.
3. Differential birth-rates in different social classes.
4. Large families.
5. Justifications of birth-control.
6. The bearing of legislation on the development of the population.

## SECT. 6.—*Economy.*

1. Interrelations between wealth and density of population.
2. Internal migrations.
3. International migrations.
4. The depopulation of some mountainous territories.
5. Famines.

## SECT. 7.—*History.*

1. The numerical evolution of population.
2. Epidemics in history.
3. Malaria and the decline in the birth-rate of ancient Rome.

## SECT. 8.—*Methodology.*

1. The measure of fertility.
2. The measure of homogamy.
3. The money value of a man.
4. Methods for the cartographic representation of population density.
5. The median point of a population and its determination.

# **Index-Numbers of Prices of Agricultural Products**

The International Institute of Agriculture has recently published in Rome a methodological study having the object of explaining the purposes and procedures adopted in many countries in the construction of the different series of index numbers and therefore their significance. This documentation presents a scientific and practical interest to all those occupied in the study and use of index numbers of prices of interest to the agriculturist.

This publication of the international Institute of Agriculture also contains tables in which are grouped all the data available for a series of years, as far as possible from January, 1921 to December 1929, concerning index-numbers of prices of agricultural products and other price-indices of interest to the farmer.

The Institute publishes periodically in its "Monthly Crop Report and Agricultural Statistics" the index-numbers which are available in many countries of the world.

B. T.

Rome, June 1931.

# Mughal Bibliography

Messrs. D. B. Taraporevala Sons & Co., are to publish shortly an annotated bibliography of books and manuscripts relating to the Mughals in India on Art, Science, Biography, History, Geography, Travel, Literature, Philosophy, Religion, Economics, Sport, &c., &c. It is now being prepared and will be published early next year. Every effort is made to make the bibliography as complete as possible. Authors desirous of having their works included in the Bibliography are requested to send particulars of their books or magazine articles to the Editor of the "Indian Literary Review," 190, Hornby Road, Bombay, as early as possible. The full title, author's name, number of pages and illustrations, year and place of publication should be clearly mentioned. If possible, a very short summary of the contents also should be given. If any persons or institutions happen to have any unique manuscript, full particulars of the same should be given.

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# Award of the Maynard-Ganga Ram Prize

**I**N 1925 the late Sir Ganga Ram, Kt., C.I.E., M.V.O., R.B., Lahore, with that generosity for which he was so well-known, handed over to the Punjab Government a sum of Rs. 25,000/- for the endowment of a prize of the value of Rs. 3,000/- to be called the Maynard-Ganga Ram prize and to be awarded every three years, for a discovery, or an invention, or a new practical method which will tend to increase agricultural production in the Punjab on a paying basis. The competition is open to all throughout the world. Government servants are also eligible to compete for it.

Sixty-four entries were received in competition for the first award of this prize. Out of this number, however, only fourteen complied with the conditions of award. Four committees of judges were appointed to examine and report on these entries. Their reports were considered finally by the Managing Committee of the prize on 3rd March, 1931, when it was decided that the prize should be awarded to Dr. C. A. Barber, Sc.D., C.I.E., 294 Cherryhinton Road, Cambridge, for his fundamental discoveries which have resulted in the production of Coimbatore seedlings sugarcanes. These canes have been definitely proved to be much higher yielders under Punjab conditions than the old indigenous varieties. The area under Coimbatore sugarcanes in the province is increasing rapidly each year and it is expected that they will totally replace indigenous varieties in a few years' time.

Applications for the next award should reach the Director of Agriculture, Punjab, Lahore, on or before the 31st December, 1932.



## REVIEWS OF BOOKS

THE DUAL SYSTEM OF STABILISATION, by J. Taylor Peddie. Macmillan and Co., London. Price 8s. 6d. net. Pp. 191.

This is not an easy book to review because apart from the main thesis which is of doubtful soundness there are numerous statements which disfigure the book. The author says that 'no part of the case which I am advancing is based on theory.' He tells us that the gold standard does not exist, and that, if it could exist, it is unnecessary' (page 12) and 'our present gold standard system is the greatest inflationary system that ever existed, and, from some points of view, it is the greatest sham and imposture ever perpetrated on an innocent public' (page 37). 'Because of unsound monetary conditions in India and China, the Lancashire cotton industry is losing its trade in those countries' (page 22). 'The productive industries derive no advantage—in so far as it may affect costs of production—from the manipulation of the Bank Rate downwards, and the cheapening of money rates' (page 27). 'From a national point of view, approximately 80 per cent of all industrial production is profit; and 100 per cent of all agricultural production is profit' (page 71). 'Little did Adam Smith realise that, in this enlightened age, we should be reduced to the absurdity of attempting to prove that consumption—and not taxation—was the sole end of all production' (page 89). 'The depression in the basic industries is largely due to the weight of taxation' (page 130). 'The volume of industrial production is regulated by the volume of agricultural production, and the more of the latter that is done at home, the more prosperous will the country become' (page 152). 'There are three distinct divisions in our so-called economic system, namely, (1) Production; (2) Government Finance and Taxation; (3) The Monetary System; and the last two are parasitical since they can exist only by feeding on production' (page 34). Such statements have been culled at random.

It is, however, with the main thesis of stabilisation as outlined in the book that the reviewer is chiefly concerned and it will be fairer, to the writer if his own works are given as far as possible. He lays down that 'the producers should have the right to predetermine the price-values of their own values. A little reflection will indicate that this function of predetermining prices is one which the producers alone should assume, since it also involves wages.' In Chapter XVI the scheme is described and we are told that "the dual system of stabilisation will eliminate most of the imperfections now to be found within the economic system, of which complaint is justly made. It will permit an area of gradually falling costs of production and rising wages, without any contraction in the quantity of money. As the volume of production expands, the quantity of money will be expanded proportionately. Thus we get the dual system of increasing purchasing power,

namely, through rising wages and falling prices, which accords with modern Central Banking practice. The adoption of the 'Dual System' will eliminate 'inflation' and 'deflation,' two defects that will always be present in any theoretical gold basis system, and if these be removed, what remains will be natural stabilisation. The dual system may be summarised as a system that promotes purchasing power in two ways, namely (1) through prices tending to fall to their stable point, (2) through increasing wages. Both of which depend on the quantity of money being increased proportionately with the quantity of work." The more one analyses the scheme the more one sees that it will not work. We go back to the theory of value which clearly shows that producers cannot 'have the right to predetermine the price-values of their own productions.' Jevons, Bohm-Bawerk, Wieser and others have long ago attacked the problem and no scheme of stabilisation such as that put forward by the author could ever work out as he imagines.

I am not sure whether prices should be stabilised at the present level even if a stable purchasing power scheme were practicable. Should we not rather try to get back to the 1929 level? At present we are in a trade depression not belonging to the trade cycle but one of a very exceptional kind for which exceptional remedies are necessary. In Great Britain costs are relatively high as compared with certain of her industrial competitors and it will, it seems, be imperative to reduce wages to prices. Were complete unanimity to prevail among central banks especially those of the United States and France with regard to the raising of prices, it would certainly be possible to do so through the monetary machine. The monetary school has, however, many opponents and these latter hold that it is the maladjustment of prices of primary products, such as wheat and cotton, and manufactured goods which is a root cause of the world depression. The price of wheat is only one-fourth the price of some years ago and is below the pre-war level while the price of the manufactured article (bread) is higher than the pre-war level. The purchasing power of the wheatgrower is curtailed in consequence of this. In recent years great efforts have been made by producers, assisted by governments, banks and investors, to raise the price of primary products to the level of manufactured goods. This has been anything but a success as with the curtailment of production there came a fresh stimulus to production. The Gold standard, if replaced, would have to be succeeded by a system approved by all countries linked up in their economic solidarity and also as stable as the gold standard. Gold could only be replaced by liquid assets of value such as short-dated securities. The supply of these is not limited and there is, therefore, the danger of inflation. The attempt to keep the price-level would be very arduous. In plain English there are not in existence that cooperation and confidence nor that statistical organisation required for such a purpose. We must, in short, not abandon the gold standard as this would lead us deeper into the mire. What we must do is to improve the gold standard. That is the far better alternative. Space forbids one further to work out this to the extent it deserves. That must be kept for a future occasion.

G. FINDLAY SHIRBAS.

**THE COMING RENAISSANCE: A Study in Socio-Economic, Ethical and Cultural Problems of the Day**, by P. L. Varma, M.A., LL.B., with an Introduction by Sri Bhagwan Das. The Indian Press., Allahabad. 1928. Rs. 3-8-0. Pp. 207.

Mr. Varma makes large claims both for himself and for his book and it is indeed high praise that Dr. Bhagwan Das bestows on him in his Introduction to the book. Writes the author: "The Coming Renaissance . . . embodies my faith in the ultimate liberation and triumph of humanity." And he assures his "gentle readers both of the West and the East that this book stands out preeminently for a true synthesis of all that is best in the thought and philosophy of the East and West." The author has no doubt attempted to combine the Eastern and Western thought. He has also read extensively both Eastern and Western literature. But it is a curious amalgam that he produces in *The Coming Renaissance*. There is very little assimilation and there are a number of facile reconciliations. His praise of the ancient Hindu institutions and systems is lavish and indiscriminate. His quotations especially from his own earlier book destroy continuity of thought and cause considerable annoyance. His thought is at places confused and his exposition is also obscure at times. His language is high-sounding and rhetorical but it is often merely sentimental and without very much meaning. In order to make the book useful the author should do a good deal of more thinking and should imbibe a more scientific spirit. There are a number of ideas in the book which if they are properly worked out in a spirit of moderation are likely to prove of considerable utility to people in this country at the present juncture.

Mr. Varma regards his book in the nature of a Utopia—rather he considers it as "the golden mean of many Utopias." Indeed "the standard of 'plenty and prosperity' which" according to the author "the government of a country must secure at all cost" is very much higher than any put forward by the Western writers of Utopias. The minimum standard of Mr. Varma includes the following modest items:—

- " (1) There should not be a single case of unemployed labour.
- (2) The minimum daily wage must suffice to support at least a family of ten members (since an ordinary farmer with his primitive tools could raise enough to support as many) amply as regards food and other prime necessities—the labouring time being not more than six hours a day.
- (3) The food must be so cheaply available as to require almost no labour, hence the greatest possible investment on land by the most improved methods must be secured.
- (4) The minimum wage should go on increasing and the prices should go on falling, even with the increase in population.
- (5) The land taxes must be the least, the very very least.

This standard of plenty and prosperity is to be secured according to the author by a combination of communalism (as expounded by Professor Radha Kamal Mukerjee in his *Principles of Comparative Economics*) and State Socialism. It is not possible to have any idea of what that resulting system will be—nor does the author give it any definite name, eastern or western, ancient or modern. He then expounds a theory of interest according to which the total amount that can ever be gained from one person is the sum equivalent to the capital originally advanced. This theory is actually put into practice in several of the Indian states—but it is doubtful whether the moneylender is more “just and humane” in those states.

The Society outlined by the author is the old Indian Society which some scholars imagine existed in the remote golden past. It is to be ruled by the philosopher-kings of Plato or the wise Brahmins of old. “Who would deny” writes Mr. Varma “that the legislators of the country must be selfless people, whose main qualification must lie in the height of their sacrifice and not their property acquisitions? To the true Brahmana or legislator the whole humanity must be akin to his own family—he represents the idea of kingship: the father of the subject people. The spirit of renunciation, selflessness and sacrifice must be fully ingrained in his nature, the ideals of social service and public reform must be the stirring ideals within him. The diffusion of free education must be the great pastime of his leisure. And, above all, he must be the greatest apostle of the average standard of living or the minimum-comfort-wages being secured to the lowest unit of labour.” Similarly “the state servants—the ‘Great *Kshatriya* order’ of the Indo-Aryan Polity—” are to be dominated with “the pure motive of power or honour” and not of gain. They are to get salaries graded “between the two limits of the actual minimum-wage-in-existence as a result of Supply and Demand of Labour and the average-comfort wage fixed upon by the legislature as the larger limit.” And, of course, the Sudra or labouring class must be dominated with the motive of service without any place in the government of the country. The author believes in the beauty and utility of the joint family and goes into panegyrics over the position of women in Indian society.

Such is the Utopia created by Mr. Varma. It is not necessary to criticise it or to say anything more than what has already been said above by way of appraisal. I would only add that the problem of human progress is certainly an eternal one and it is very enchanting and engrossing. To subordinate “the lower-self” and to bring out “the higher self” is indeed desirable but it is a very uphill task. Moreover the substitution of other incentives except monetary gain is also most essential but this cannot be achieved by offering “power and honour” to some and “service” to others.

GURMUKH N. SINGH,

THE AGRARIAN SYSTEM OF MOSLEM INDIA, by W. H. Moreland. Published by W. Heffer and Sons, Limited, Cambridge. Pp. xvii, 296. Price 15s. net.

Mr. Moreland the author of the Agrarian System of Moslem India does not need any introduction from me. He is already well known to most of us as the author of two brilliant books on Administrative and Economic History of the Mughal Period. In the present volume he has attempted to give us a connected and succinct idea of the agrarian system during the entire Moslem rule in India, that is, from the 13th to the end of the 18th centuries. In Chapter I he gives us an idea of the Hindu agrarian system to which the Muslims succeeded and the Muslim agrarian system as it prevailed in Persia, during the palmy days of Harun-ul-Rashid. A comparative study of the two leads him to the conclusion that the two systems agreed in essentials, therefore neither the Muslim conquerors nor the conquered Hindus had much difficulty in adapting themselves to each other, and that in this process of adaptation the Muslims did as little as possible to modify the existing Hindu System.

In Chapter II conditions during the 13th and 14th centuries are discussed. In the first century "the position of the Moslem governor was at times precarious and the force at their disposal can scarcely have been sufficient for the effective subjugation of the country—(therefore) we may infer that the Hindu chiefs were the dominant factor in the situation. If chiefs rebelled, that is to say, did not pay the revenue, the case was one for military force. In any case, the relations between a chief and his peasant were not affected by the establishment of the Moslem rule and inside the village the established agrarian system continued to function.

The author observes that: "there is no record of any large changes in the agrarian system of the Delhi kingdom earlier than that which was effected by Alauddin Khilji about the year 1300." The measures adopted by Alauddin were:—

(1) The standard of revenue-Demand was fixed at one-half of the produce without any allowances or deductions; (2) The chiefs' perquisites were abolished, so that all the land occupied by them was to be brought under assessment at the full rate; (3) The method of assessment was to be Measurement, the charges being calculated on the basis of standard yields; and (4) a grazing-tax was imposed apart from the assessment on cultivation.

Alauddin's system did not survive its creator. His son and successor devoted himself entirely to pleasure. He formulated no agrarian policy of his own, but allowed his father's minute regulations to lapse in their entirety. The revenue demand was lowered. His successor reorganised the revenue administration of the kingdom. He discarded Measurement in favour of Sharing, and he restored the chiefs to their previous position.

During the reign of Muhammad Tughlaq the next ruler no important changes in the agrarian system took place. No doubt he, in the beginning of his reign made an attempt to increase centralisation by introducing the system of direct

management in the outlying parts of the kingdom. But when this proved ineffective he took to the Farming System on a large scale. His successor Firoz Tughlaq also does not appear to have done anything vital to change the system in vogue. At the end of the 14th century then we may say that the king's share of the peasant's produce was fixed by Alauddin at one-half; the figure during other reigns is not recorded, but was probably less, rather than more. As regards the method of its assessment, there were two currents of opinion, one of which favoured reliance on the area sown, while the other looked at the produce reaped. Individual kings chose one method or the other, and doubtless their orders were carried out in the country which they administered directly; but the larger area was controlled by the Governors, sometimes holding in farm, or by chiefs retaining their internal jurisdiction. The more probable view is that the different methods of assessment persisted side by side--and the existence of Assignments must be regarded as a factor working strongly in favour of local diversity. The form in which the demand was ordinarily made on the peasants is not recorded in so many words, but the fact that Alauddin, for special reasons, ordered collections in some areas to be made in grain shows that cash payments were, at any rate, common though in this matter, as in others, individual chiefs and assignees may have followed their own inclinations.

It can be said with confidence that the records of the century disclose no trace of either the institution, or the conception, of private ownership of land in the sense which the term "ownership" bears today. All forms of tenure were liable to summary resumption at the King's pleasure. . . . So far as the peasants were concerned, the idea prevalent in Hindu times, that cultivation was a duty to the state, and not a right of the individual, still persisted. . . . The position of the chiefs was a matter of politics rather than of law. Ordinarily they could hope to retain their jurisdiction so long as they paid the stipulated revenue; when they defaulted or rebelled, the matter in dispute was settled by force or by diplomacy according to circumstances.

Whether the peasants enjoyed in practice the security of tenure which is nowadays regarded as a primary condition of successful agriculture, is a question on which the records of the period throw no direct light. It is clear, however, that there was fertile land to spare, waiting for men with the resources needed to bring it under the plough; and in such circumstances, the question of ejectment is of little practical interest, because the essence of good management is to keep the peasants at work, and help them to extend their holdings.

In Chapter III conditions during the 15th and first quarter of the 16th century are discussed. For the first half of the 15th century Moreland observes that "it is, at the least, improbable that any general agrarian measures were instituted, still less enforced. The conditions would make for diversity of practice in assessment and collection, and the probabilities are that each individual dealt with the peasants very much as he chose. We may guess that group assessment gained ground at the expense of sharing or measurement, because it was more suitable to the conditions, which prevailed, but we have no precise knowledge on the

subject. A few casual references show that Assignments were given, and that is practically the only definite fact which I have found."

In the next seventy-five years we are told "that during this period the Assignment was the most important agrarian institution, and that it had now taken the form which is familiar in the Mughal period, that is to say, the assignee was bound, not merely to loyalty and personal service, but to the maintenance, out of the assigned income, of a body of troops available for the King's needs. The assignee within his jurisdiction appears to have had perfectly free hand. When Sher Shah came to the throne of Delhi in the middle of the 16th century he introduced important agrarian changes. The administrative unit adopted by Sher Shah was the existing *pargana*, each of which was placed in charge of two officers, Shiqqdar and Amin, with a treasurer and clerks; while for purposes of control the *parganas* were grouped in districts, now named Sarkar. In regard to assessment, he imposed the method of Measurement on practically the whole of his dominions. As regards the share of the produce which was to be taken as the basis of the assessment rates one-third of the produce was taken as the revenue demand. "Apart from his action in regard to assessment, Sher Shah appears to have initiated no large changes of system. Assignments continued to be granted—and there is no suggestion of any alterations in the conditions attaching to them." "There is nothing in the literature to indicate that either Babar or Humayun made any alterations in the agrarian system, and the few references I have traced to the subject suggest that they accepted what they found. . . ."

Akbar succeeded to the throne in 1556. For the first 24 years of his reign the revenue administration may be described as a series of experiments, while thenceforward the authorities indicate that stability of system had been attained. During the first 24 years, put briefly, the story which has to be told is one of three sets of assessment rates, which may be called respectively "Sher Shah's," "the Qanungo," and "the ten year"; all three belonging to the general type designated by Moreland as Measurement, that is to say, a charge, varying with the crop, on the area sown. Under Akbar, the actual demand was made in all cases in cash and the basis of assessment was one-third of the produce. In the beginning the vexatious process of commutation of yield in terms of cash on the basis of current prices was adopted but later on the rates adopted were the average of those which had been fixed for the previous ten years. In the schedules, the *parganas* were grouped into what may be described as assessment circle with a schedule of rates for each circle.

Whether these assessment rates applied to the whole area of the provinces, Assigned as well as Reserved, or to the portion administered directly by the Revenue Ministry? Moreland's answer to the query is that "for the greater portion—the sanctioned assessment rates were binding on the whole country to which they applied, with the exception—probable, though not recorded—of those tracts for which chiefs paid a definite tribute instead of a varying annual revenue."

The practice of granting assignments was discontinued by Akbar, but for a

brief period of about five years only, after which it was resumed and continued throughout the Mughal period. Throughout the period the great bulk of the Empire, sometimes seven-eighth of the whole, was in the hands of the assignees. However, Assignment-System in force under Akbar differed from that which had prevailed earlier in the century. As the designation implies, the essence of the system was to set aside particular items of recurring revenue to meet particular items of recurring expenditure, usually, but not invariably, the salaries and expenses of the Imperial service. Every servant of the Mughal Government, in addition to the general obligation of service was under the liability to maintain at his own cost a definite force of cavalry available at all times for the Emperor's needs; and an officer who did this was entitled to receive an income defined exactly in money, corresponding to his rank.

The actual working of Akbar's revenue system was entrusted to the collector and the staff under him. However it must be noted that the complete application extended only to the areas reserved for direct administration, though the sanctioned schedules of the assessment rates were binding on the assignees, but in other matters of details they were allowed great deal of freedom of action.

The environment in which the code was intended to operate is not formally described, but we can discern in its provisions the elements of a village with a number of peasants each in separate possessions of his holding, with one or more headmen occupying a privileged position, and with a *patwari*, keeping records of cultivation, assessment, and collections, records which were available to the administration, but belonged to the village. The collector's attitude towards the peasants is defined in precise terms. He was to be the peasant's friend, and as such was to be accessible to them without intermediaries. He was to treat each peasant as an individual; and, in order to be able to do this, he was required to familiarise himself with agriculture in its local aspects. He was required also to recognise the importance of the headmen in developing the village as a productive unit, and, in cases where their efforts were successful, he was to allow them a share in the results, the proportion of  $2\frac{1}{2}$  per cent; calculated on the cultivated area, being suggested as appropriate; but he was prohibited from coming to terms with them for a revenue demand assessed on the village as a whole.

It was the collector's duty to secure extension of cultivation, and improvement in cropping; the general idea was that he should offer liberal terms to peasants to induce them to increase production, and should hold them firmly to their engagements when once engagements had been made. In order to secure improved cropping, he was authorised to reduce the sanctioned assessment-rates on high-grade crops; while, for extension of cultivation he was empowered to depart from the regulation system of assessment by Measurement, and agree to practically whatever the peasants wanted, to either Sharing or Group-assessment, and to payment in either cash or kind. Provision was made for advances of capital to needy peasants, and presumably this would cover loans for wells, but the omission is nevertheless noteworthy.



It is, I think, possible to obtain a general view of this system as it must have presented itself to an ordinary peasant. He knew beforehand the extent of his liability to the State, and could plan his season's cropping with a knowledge of the amount of cash he would have to find; but he was necessarily ignorant of the prices at which he would be able to sell his produce. So far as the revenue-demand was concerned, he was not exposed to the tyranny of a village oligarchy, but, on the other hand, he would have to reckon with the exactions of the measurement-party and the subordinates employed in collection. He might be harassed further by an energetic collector intent on the extension of cultivation and the improvement of cropping, without due regard to the possibilities of the locality; or he might find himself placed in relation with a prudent and sagacious officer who would assist him to make the most of his resources. Thus the effects of the system must have depended wholly on the manner of its administration: according to circumstances, it might be either helpful or intolerably vexatious; and evidence is wanting to show which alternative is nearer the truth. We may safely guess that neither was universally true, that there were good collectors as well as bad, and that the balance was determined, in the last resort, by the personal qualifications of the Emperor. We can believe then, if we choose, that the system worked reasonably well in the Reserved districts under Akbar's rule.

Peasants in Reserved districts were, however, but a small proportion of the whole; the ordinary man had to look to the assignee to whom circumstances entirely beyond his control might entrust his destinies. The literature of the 16th and 17th centuries does not of itself enable us to form a definite judgment regarding the conduct of the assignees. All that can be said is that frequent changes in Assignments undoubtedly made for inefficient and oppressive management, because they rendered anything like a constructive policy a waste of effort. A collector might work up his district, and be rewarded for doing so; an assignee might lose his holding before his efforts began to bear fruit, and in all ordinary cases would have been very unwise to sink capital on such precarious security.

During the reigns of Jahangir and Shahjahan Akbar's system had gradually decayed. While sharing was authorised in certain backward tracts, the general rule of the Empire came to be Group-assessment, with the alternations of Measurement and Sharing held in reserve to be used only in cases where the headmen would not agree to a reasonable reserve-demand for the year. The distinction between Assigned and Reserved tracts stands out clearly in the chronicles relating to this period; a relatively small portion of the Empire was administered, so far as the land-revenue was concerned, directly by the Ministry, while the bulk was assigned on the lines studied under Akbar. The only definite innovation which Jahangir records is the institution of the Grant-under-seal (*altamgha*), which is of interest as constituting the nearest approach to land ownership, in the modern sense. The scope of such grant was limited to the case where a deserving officer applied for a Grant of his "home," that is to say, of the village or *pargana* in which he was born; in

this case the grant was to be made under a particular form of seal, and was not to be altered or resumed. This Grant-under-seal, it may be noted, was not an Indian institution, but was avowedly copied from Central Asian practice. These grants were very rare.

Coming to Aurangzeb we find that under the Provincial Diwan the revenue staff consisted of three sections, the Amin, whose primary business was assessment, the Krories, who were concerned mainly with collection, and the Treasurer, who handled the money when it was received. These subordinates were posted to circles (*chakla*) which were not identical with the districts (*sarkar*) of Akbar's time, but were presumably arranged with reference to the amount of work. The basis of the revenue-demand was now higher than under Akbar: his standard of the one-third of the produce had become the minimum, while more could be claimed, up to a maximum of one-half. As under Jahangir and Shahjahan we find Group-assessment the regular rule. At the beginning of the year the assessor (Amin) fixed the total sum to be paid by a village, or apparently on occasions by an entire *pargana*. The village could refuse the assessment offered by the Amin, in which case the revenue was taken from it by either Measurement or Sharing, at the discretion of the local officials. The demand on the individual peasants was thus ordinarily left to be fixed by the headmen.

Turning from assessment to collection we find that cash-payments by peasants were usual; and the absence of any provisions for the disposal of revenue received in kind suggests that this practice was not general.

The orders which have been summarised above applied primarily only to the reserved areas a small fraction of the Empire, but their provisions were intended, at least, to set a standard of procedure in Assignments, for the officials employed by assignees were to be urged to act in accordance with them. To see that the officials appointed by the Assignees followed the Imperial rules the Diwan was required to report on the loyalty and efficiency of the assessors and collectors employed in Assignments and punishment followed an unfavourable report.

"Here the story which I have been endeavouring to tell comes to its conclusion, so far as the assessment of the peasants in Northern India is concerned. I have traced no reference to any important change during the century and a half intervening between Aurangzeb's accession and the establishment of the British rule in the North; while the practice which was found in operation by the early British administrators is precisely that which is described in Aurangzeb's orders of 1665. We may take it then that the method of Group-assessment, which at some unascertained time, superseded the methods favoured by Sher Shah and Akbar, persisted as the ordinary practice in Northern India until the end of the Moslem period. The interest which the intervening years possess for us lies in the developments affecting intermediaries, which resulted in the fusion of Assignees, and Grantees, Chiefs, Headmen and Farmers, into a body of landholders, which was to be recognised by British Law as homogeneous."

I have tried to give above, mostly in the words of Moreland himself, an idea

of the Moslem Agrarian System which, I am sure, students of Rural Economy in this country will find of absorbing interest. Agrarian System of Moslem India is a brilliant piece of research and our thanks are due to Mr. Moreland whose devoted labour of many years has made it possible for us to see in a full fledged form some of the agrarian institutions that prevailed in the Pre-British days.

B.G. BHATNAGAR.

THE POST-WAR UNEMPLOYMENT PROBLEM, by Henry Clay, M.A., Professor of Social Economics in the University of Manchester. Published by Macmillan & Co., Limited, St. Martins' Street, London. 1930. Pp. 205. Price 8s. 6d. net.

Henry Clay is sufficiently well-known as a writer of great repute and much popularity. His works have won for him a name for accuracy of details and scientific management of facts and arguments. His present book under review dealing with the question of unemployment—a problem highly controversial and complicated, comprises a task of stupendous difficulty which he has managed to execute with a thoroughness that commands admiration, for he has, within the compass of a single volume of 205 pages, attempted to give what others will require volumes to put in.

The book consists of six chapters, the first of which opens with a comparative survey of pre-war and post-war unemployment. In the second chapter the author proceeds to trace the course of unemployment since the War, and arrives at the conclusion that the course of employment generally corresponds with the movement of prices. The third chapter has been devoted to a critical examination of the bearing of monetary deflation upon post-war unemployment. The fourth chapter deals with the chief types of influence that to a greater or less extent have determined the course of employment in all the industries. In the opinion of the author, the concentration of unemployment, confined to a limited group of industries is attributable to three general influences—'the effect of the war in expanding industries beyond normal peace-time requirements, the effect of the war in stopping the adjustment to changing competitive conditions, and the differential burden of costs, as compared both with other British industries and with foreign competitors, for which deflation accounts in part, but only in part.' In the fifth chapter entitled 'Recent Policy and Its Implications' the author observes that the unaided expansion of industry would not solve the problem of unemployment. He goes on to say that the measures, e.g., those of Selective Protection to industries, the transfer of workers from declining to growing industries and De-rating, hitherto adopted have been inadequate to their object. 'Private enterprise does not flag,' he adds, 'without a reason, nor does industry recover without some more tangible reason than "the cumulation of activity."' The volume concludes with a summary of previous chapters and conclusions arrived at from foregone discussions. The author's views may be summed up in the following lines :

Since industry is not static, it cannot expect to maintain its efficiency if it is making losses, still less to improve it. Spontaneous reorganisation of the depressed industry, therefore, is beset with almost insuperable obstacles. A reduction in costs, however, can ease the situation, revive enterprise, and ultimately solve the problem of unemployment. But it can be brought about only by a large measure of reorganisation, commonly referred to as rationalisation. The Government must offer financial assistance, if necessary and initiate reorganisation even under compulsion if inducement fails to achieve the desired end.

The work thus presents an intensive study of a vital problem which is yet unsolved. The plan of the book is thoroughly methodical and every page of it bears witness to the fact that the author had an exhaustive study of the subject and a complete mastery over it. He seems to have spared no pains in utilizing every available source of information and in securing reliability and consistency. The accompanying tables and charts are excellent and it appears from the frequent interpretations and qualifications that the author, at every stage of his task, was acutely aware of the exact significance of all the figures that he made use of, and of their imperfections.

The author is to be congratulated for bringing out such a fine treatise which cannot but earn the praise of all who are interested in labour and other social problems.

SHANKAR LAL AGARWALA.

AGRICULTURAL MARKETING, by Brijendra Nath Bhargava, M.A. Longmans Green & Co., Ltd. Pp. xiii+109.

The book under review is a monograph submitted as an M.A. thesis in the Department of Economics and Sociology of Lucknow University. Dr. Radhakamal Mukherji has written an Introduction.

The Report of the Royal Commission on Agriculture which appeared in 1928 drew attention to the paucity of published material in regard to the marketing of agricultural produce in British India. In the absence of adequate and authoritative information the Commissioners were constrained to deal with the marketing problem in a tentative manner, reserving final judgments for those who would make a first-hand study of existing conditions. The gap is now sought to be filled by the various banking committees and also by intensive enquiries conducted under University auspices.

Among these intensive enquiries Mr. Bhargava's survey is almost a pioneering effort and claims to be the first systematic study by any individual in the marketing conditions in rural tracts. In his monograph he deals with subjects like the cultivator as trader, the chain of middlemen, speculation in produce, storage facilities, periodical markets, transport conditions and then collects all his inferences and conclusions into a final chapter which he calls *Some Main Defects and Suggestions*.

The list of subjects discussed is no doubt imposing but as one reads the book one cannot help wishing that the writer had taken pains to collect data under each of these topics. The field of his enquiry is limited to the Sadabad Tahsil in Muttra District, U.P. Of course as no map of the area is given—there is no particular importance attaching to the Sadabad Tahsil which makes it so famous as to be known by the ordinary reader—not even a descriptive account of the agricultural tract which would serve as a background for the investigation, it is difficult to judge of the actual ground covered upon which the conclusions are based. There is almost a studied avoidance of tables, figures, data, diagrams, a copious supply of which one would naturally expect in a survey of marketing conditions. The writer produces the impression of speaking from a general knowledge rather than knowledge which comes of actual quarrying and spade work done in the rural economics of the tract under investigation.

Perhaps it is easy thus to find fault with an attempt which is admittedly a pioneering effort. The writer deserves his full mead of praise as he has, while yet an M.A. student, tried to venture on a new path. Moreover, he has honestly endeavoured to meet the criticism of the Royal Commission that "No systematic survey of the conditions under which agricultural produce is marketed in India has been made in any Province." The book is written in a bright, crisp style and is eminently readable. It does succeed in giving a sketch in outline of the marketing conditions of the area investigated.

V. L. D'S.

SOCIAL SERVICE YEAR BOOK, 1929. Edited by S. Fred. Hall.

RUSSEL SAGE FOUNDATION. Pp. 600. Price \$4.

In this compendious volume, one can find a fair survey of all the social services done in the United States of America—that most pragmatic land of the world. Every form of evil to which humanity is heir, and which is amenable to social service is combated by some systematic or organized agency or other. Eminent authors record on its pages the achievements of American genius and generosity in the field of social service. There is a catalogue of Social work agencies with whom one can correspond for further information on the subject.

In India we have not indeed the American gold; but we have our young men—their grit, their stamina, and their enthusiasm—well tried in many fields of activities. They are the richest resources of India's Social Service. The Call has gone forth to them. We are agreeably surprised to see that the cosy chairs and the murky books of our libraries are gradually being abandoned for the study of life by confronting life itself, in the stinking slums, in locusts swarming fields, in the smoky factories, and in those segregated groups of dirty mud huts that go by the name of village. But we lack the push, the coordination and the organization. It is here we can turn to American experience. A study of their social service will

encourage and inspire our young men and open out new vistas to their characteristic generosity and enthusiasm

A. N.

A HANDBOOK OF PRACTICAL AND WRITTEN WORK IN ECONOMICS, by E. C. Bhatti.

Published by the Indian Press, Ltd., Allahabad. 1930. (165 pages in addition to numerous maps and diagrams.)

The importance of a work of this nature is clearly and fully brought out in the Foreword to the book by Professor C. D. Thompson, of the Allahabad University and the Chairman of the Committee of Courses in Economics of the Board of Intermediate and High School Examinations, United Provinces. "To provide a background and a foundation for the right understanding of the theory. . . for carrying out the practical work correctly, for increasing greatly the value of this work to the student, and for shortening the time required to make the work successful, this little work will be found exceedingly useful—" thus has the originator of the present course in the Intermediate Practical Economics expressed himself of the book.

The book is divided into three sections. Section I entitled *Practical Work* contains valuable instructions for collecting facts and figures, Questionnaire No. 1 for collecting information regarding consumption budgets, Questionnaire No. 2 for collecting information regarding the production budget of the cultivator, Questionnaire No. 3 for collecting the information regarding the production budget of an artisan, forms for tabulating the information collected by students and detailed instructions for preparing diagrams with two model diagrams. Section II entitled *Written Work* contains an extremely helpful bibliography for a large number of popular subjects for essays, e.g., Indian soils, Indian agriculture, chief sources of motive power in India, cattle problem in India, Indian forests, the poverty problem, etc., a questionnaire for village study and model essays on interesting subjects like crop production in India, the application of Malthusian Doctrine in India, oil-seed crushing industry in India, the cotton industry of India, the tea industry of India, etc. Test questions on each portion of the syllabus have been profusely given and they cover nearly 30 printed pages of the book. The questions given in the book are admirably calculated to elicit the existing knowledge of students, to educate and develop their minds and to stimulate mental activity which should enable students to acquire higher knowledge with ease and interest.

The author deserves to be congratulated on the efficient manner in which he has succeeded in his object of making Economics "a real and live subject and a ready tool throughout life to the student" by enabling students to do the preliminary practical work properly in place of "dull cramming and vague speculation."

The last section of the book comprises maps showing economic conditions of India. Great pains have been taken in their selection and preparation and they should prove helpful to the students in fixing knowledge accurately, and easily on their '*tabula rasa*.' Maps and diagrams, it must be remembered, play an important part in the economic studies of a young man. They may be aptly described as economic microscopes.

The printing and get-up are good, but a few minor mistakes of spelling, English, spacing and printing occur. The useful practice of distinguishing English from non-English words by italicizing or underlining them should not be given up.

In conclusion we cannot help expressing our opinion that the book will remove a long-felt and genuine want of the Intermediate Economics students. Teachers may also find the book helpful in saving them the endless trouble of explaining the same thing over again to members of their classes individually.

SARASWATI PRASAD.

ELEMENTS OF ECONOMICS, by S. Evelyn Thomas, B.Com. (Lond.). The Clegg Publishing Co., Ltd., 36—38, Kingsway, London. Pp. 683. Price 10s. 6d. Fifth Edition. 1930.

Much need not be said about this book. The very fact that it has gone through five editions should be enough to convince any one of its excellence and usefulness. Indeed, it is one of the best text-books on Economics that we have come across. There is, of course, nothing in its pages that is original, nor does the author lay claim to anything of the kind. His object is simply "to present the elementary principles of Economic science in as clear and interesting a manner as possible." That object, we can say at once, he has achieved fully and creditably. He has explained the principles of Economics in a most lucid, delightful and enlightening manner. In the first three chapters he gives the meaning of Economics, states its methods, describes the evolution of the modern industrial system and defines such terms as value and wealth. Chapter 4 deals with consumption—wants and their satisfaction. The next seven chapters are devoted to Production. Exchange is dealt with in Chapters 12 to 15. The explanation of Distribution is taken up in the next seven chapters, of Mechanism of Exchange in the following eight chapters and of the Economics of Government in the next four chapters. The last chapter—chapter 35—is devoted to the Development of Economic Theory. The book is thus a thoroughly comprehensive one. Not a single subject is left untouched. The student, who, therefore, gets a copy of this book will not be required to go to any other book to learn the fundamental principles of those subjects that fall within the scope of Economics. He will find everything that he wants to know in the pages of this book.

We can therefore recommend the book to the students going up for graduation with confidence and without hesitation. The book is particularly useful to B.Com.

students because where it deals with subjects touching commerce such as money, banking, and foreign exchanges, it gives technique as well as theory.

We congratulate both the author and the publishers on the production of this very useful book. Considering the number of pages, about 700, it contains and the get-up of the book, which is very good, its price 10s. 6d. is quite low.

G. D. K.

THE COMMERCIAL POLICY OF THE MOGULS, by D. Pant, B.Com., Ph.D. D.B. Taraporevala Sons & Co., Bombay. 1930. Pp. 281. Price Rs. 6.

This work is divided into six books. Book I gives a bird's-eye-view of the economic history of India from Hindu times to the year 1556 A.D. and is meant to serve as a background. Books II, III, IV, and V deal with the reign of the Moghul rulers Akbar, Jahangir, Shahjahan and Aurangzeb respectively. And Book VI which is entitled Side-Lights on the Great Moghuls—their Government, Trade, etc., discusses further the points that have been touched in the previous four books.

Books II, III, IV and V are each of them further subdivided into five chapters. Chapter I of each of these books deals with the organisation of the Empire : its extent, administration, routes and transport system, land policy and labour and its distribution. Chapter II explains capital organisation : currency and its regulation, hundis and taxation. Chapter III is concerned with a description of manufactures : raw materials and their utilisation. Chapter IV is devoted to trade—trade-centres, interprovincial trade, frontier trade and government interference in and monopolies of trade. And Chapter V contains the concluding remarks—a sort of summing up of the book.

Book I is extremely sketchy and leaves a very poor impression on the readers' mind of the author's knowledge of Hindu and Pathan India. The views he expresses are an echo of those propounded by foreign authors. He has not cared to study all the available material on the periods. He has neglected to peruse the original sources, he does not seem even to have read some of the economic histories that have been written on the ancient period by Indian scholars; and his chief authority for the Pathan period is Lane-Poole. It is true that he was not concerned with those periods directly, but when one undertakes to say something about a certain period in a work of the type the author has produced, one should study if not the original authorities at least all those works based on original sources that have been written concerning that period.

This is one defect of the book. Another defect is that particularly in the first chapters and in the conclusions of the various books much matter is given that is rather irrelevant. Not a few paragraphs are taken up with political matters, character sketches, etc. Things of this type have no organic relation with the main object of the work which is to explain and discuss the Commercial Policy of the Moghuls. When one goes through those paragraphs one wonders whether the



author is writing a political history or commercial or economic history. Perhaps the handicap from which the author suffered was that the Moghuls had no definite commercial policy and he finding no development in it, gave matter which was meant to relieve the tedium of going through a jungle of no-policy or aimless policy. Such indeed seems to be the purpose of such paragraphs as the one quoted below bearing on the character of Aurangzeb :—

“ He was a stranger to the finer instincts of humanity like Love, Trust, Tolerance, etc. In Babur's time Love mounted “ the warrior steed,” in Akbar's time she danced “ on the green,” in Jahangir's time she “ tuned the shepherd's reed,” in Shahjahan's time she was “ in Halls in gay attire seen,” but in Aurangzeb's time she was buried under the earth.” (P. 245).

This is poetry alright, but not commerce.

Of a piece with the above, so far as irrelevancy goes, are the paragraphs dealing with the causes of the break-up of the Moghul Empire after 1707 and of the death of Akbar.

Barring these defects the work is an excellent one. It supplies a great deal of valuable information on the economic topics discussed in each of the books. The author has taken great pains in gathering the material he has embodied in the pages of the work. He has read widely and deeply. We welcome the work as a very useful addition to the scanty literature on the economic history of the Moghul period.

G. D. K.

PLANTATION LABOUR IN INDIA, by Rajani Kanta Das, M.Sc., Ph.D., R. Chatterjee, Calcutta. Price Rs. 3. Pp. 194.

Dr. Rajani Kanta Das is a recognised student of the Indian Labour Problem and this study of Plantation Labour by him is worthy of study. It has been written after much research and trouble and with fairness of mind.

The paucity of books and information on plantation labour has been marked and the general public are ill-informed about the conditions of work and life on the plantations due to their remoteness and situation. The consequence is that views are held about this particular type of labour which are exaggerated one way or the other. The present book will therefore render great service in enlightening the public about one of the most important and progressive industries of the country giving employment to over a million men, women and children.

Tea is the most important of plantation industry in the country. Tea plantation, the author informs us, began in 1851 and now tea exports value to about 30 crores rupees worth annually. The leading province in the cultivation of tea is Assam, about 55 per cent of the land given over to tea is located there and about 23 per cent in Bengal.

The peculiarity from the labour point is that plantation workers are almost wholly imported labour, especially so in Assam. This being the case, plantation labour has been surrounded by series of enactments under the Plantation Legislation or Labour Emigration Acts—Workmen's Breach of Contract Act. The author has dealt with much detail upon this aspect of the problem. Indeed plantation labour matters cannot be truly understood apart from a close study of the legal aspect which the author has duly given in his work.

In all industries questions of sanitation and health are vital, but they are of special importance in plantation since workers being far removed from their homes and from other resources have to depend almost exclusively upon their employers. The roll of death, disease and suffering has been great on these plantations. Cholera, diarrhoea, dysentery, hook-worm, *kala azar*, Assam "rot" special woman's complaints, miscarriages, sterility have each their sad tale of woe, but gradually the author shows conditions have been improved and workers can look forward to healthier conditions of work on plantations.

The questions of hours, rates of work, *nirikh*, *hazira* and *ticca* are gone into carefully, matters of standards of living, drawing attention to increased liquor and narcotic drugs consumption are not neglected. In short the book gives a good analysis of plantation labour and conditions and repays study.

S. K. R.



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## THE RELATION BETWEEN CROPS AND POPULATION DENSITY IN BIHAR: A COMPARISON WITH THE AGRICULTURE OF THE UNITED PROVINCES

BY

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When an alluvial plain comes to maturity, a correspondence develops between aggregation of population and agricultural cropping. An interesting correlation is seen to exist between density and crops in the Indo-Gangetic plain. In the Central and Eastern portions of the alluvial plain we find the predominance of rice and it is here that rural density is much higher. In the United Provinces out of 43 districts omitting the Salpuras and the Himalaya divisions 17 grow more rice than the normal. Now, 12 of these have densities greater than the normal density of these 43 districts, namely, 510. It is true wheat has a higher nutritive value as regards protein but rice which is deficient in protein is relatively richer in starch and suits well a people who have to work for long hours under hot and moist conditions. Secondly, rice is not exported nor sold usually in this region. It is an autumn crop which brings food for the cultivator's family—it is grown with another Spring or Rabi crop which is a more valuable

crop with which the cultivator usually purchases the other necessities of life. Both in Eastern districts of the United Provinces and in Bihar it is upon the Rabi crop that the prosperity of a tract depends but the tracts which can support most people are those where rice can grow.

On the other hand, the predominance of rice in a region of precarious and uncertain rainfall exposes it to greater risk. The risk is the greatest on high ground which does not receive inundation water or may not be well irrigated. The risk is the least in low lands which are liable to inundations at high water times. In ordinary low lands an abundant Rabi harvest is available under normal rainfall but it suffers in case of excessive rainfall when the crops are attacked by insect pests or deteriorate on account of excessive moisture. In Tirhut Division in North Bihar the rainfall is ordinarily ample, the normal annual quantity being 53.36 inches but it is capricious and its distribution frequently untimely, especially in the north of the Tirhut Division, which has been described as "the blackest of black spots on the famine map." Here the people are practically dependent on one crop, viz., winter rice. Thus when the rains fail distress ensues. In Chota Nagpur the upland rice which is sown broadcast is in the nature of a catch-crop which gives a fair yield in seasons of regular and abundant rainfall and in other seasons may fail altogether. On the other hand, the transplanted variety in the levelled and unbanked valley bottom yields abundantly every year. But the broadcast crop is not at all the chief crop of Bihar and Orissa. Both autumn and winter varieties are grown in most districts of Bihar where cultivation depends upon both the length and the distribution of monsoon rainfall. The failure of what is called the *hathiya* rain greatly prejudices the rice crop especially in unirrigated areas in most districts of Bihar and parts of Orissa and Chota Nagpur. On the other hand, a high flood as well as water-logging are recurrent dangers of rice tracts especially those bordering the Ganges. The rice districts in Bihar are far less irrigated though they maintain

a more dense population than the districts of the United Provinces as will appear from the following table:

British India cultivated in each Province:

	Punjab and N.-W. F.	United Provinces	Bengal, Bihar and Orissa
1891-93	35	23	8
1900-02	37	34	7
1906-08	44	27	6
1912-14	42	29	6
1923-24	42.7	29.6	5.5

The figures for the period 1921—27 are as follows:

	Percentage area to total area.	
	Wheat	Rice
Punjab	39.4	1.1
United Provinces	28.9	9.1
Bihar and Orissa	5.0	18.2
Bengal	0.5	26.2

The above table shows an increasing tendency towards specialisation in wheat production in the Punjab and the western districts in the United Provinces. The share of Bihar and Orissa in wheat production is 5 per cent and that of Bengal only .5. Some of the western and central districts of Bihar like Muzaffarpur, Darbhanga, Bhagalpur, Gaya, Shahabad, Champaran and Monghyr continue to produce wheat. The area under winter rice in Bihar is very elastic. The same field which grows wheat in one year grows paddy in another year. This rotation depends on the nature of the soil, topography and the irrigation system distinctive of Bihar. In 1924-25 the area under rice shows an increase of 10.5 per cent over that of the previous year when large areas in Bihar were not sown because of drought. The same year showed a decline of the area under wheat by 4 per cent. As we proceed

towards the delta the percentage area of rice to total area as well as the outturn per acre increases rapidly as shown below :

	Percentage area to total area	Outturn per acre
Punjab	1.1	1,178
United Provinces	9.1	900
Bihar and Orissa	18	987 (a) 800 (b) 741 (c)
Bengal	...	1,022 (a) 1,142 (b) 882 (c)

(a) Winter, (b) Spring, (c) Autumn.

It should be pointed out here that the Rabi crop in Bihar is somewhat different from what it is in the United Provinces. The crop which contributes most largely to the statistics of area cropped for the Rabi harvest is in many districts undoubtedly *khesari* or *latari*, which is principally grown as a second or paira crop after rice, the seed being scattered on the rice at the end of October. It is, however, of no great importance economically, and the statistics are somewhat vitiated by the fact that areas so treated are regarded as twice-cropped and these areas go to swell the total for Rabi. In several districts the most important crop of the Rabi harvest apart from *khesari* is gram. Wheat, thus, is far less important here than in the United Provinces, although the area under it is increasing. Arhar, linseed and gram also are largely grown. The chief food crops of this harvest are wheat and barley. These are grown under precisely the same conditions and often mixed in the same field (*gojati*). The mixed cropping is due to its value as an insurance against bad weather conditions. The peculiarity of the *arhar* crop is that it grows and thrives on very

little cultivation and under adverse conditions. In general the Bihar cultivator puts very little effort in his Rabi cultivation and gets a correspondingly small outturn, except in the manured *goenra* lands surrounding the homesteads. This, however, does not apply to districts like Patna, Shahabad, Muzaffarpur or Saran where the Rabi crop is of exceptionally high importance representing 60 to 75 per cent of the net-cropped area. Thus, the very careful and productive tillage of the Saran district is especially marked in comparison with the inferior cultivation in Champaran. The Rabi outturn of the former is nearly more than double the yield of the latter district. As irrigation facilities develop in Central and Southern Bihar, the importance of wheat will correspondingly increase. On the northern tract of the Ganges which is annually moistened and fertilised by the inundation, the Rabi cultivation has already reached a high standard.

After rice the chief crops of the autumn harvest are maize and kodo. The districts south of the Ganges are characterised by a small *bhadoi* and low double-cropped area compared with the figures of rainfall for districts in the north. Generally speaking the rainfall is less in these districts in June and July, greater in August and September and less again in October. In many districts the officially recognised staple food crops are rice and maize. Thus, *Aghani* is the main crop to be protected. The development of irrigation facilities in this respect measures the immunity from famines.<sup>1</sup> The following table shows the relative importance of the principal food crops in all the districts of Bihar:

<sup>1</sup> Tanner, Final Report on the Survey and Settlement Operations in the District of Gaya (1913—19).



## PERCENTAGE OF NET-CROPPED AREA OF AREA UNDER

District	Rice	Wheat	Barley	Maize	Marua	Gram	Other food grains
Champan	54	7	15	1	8	3	25
Saran	34	6	20	3	17	5	29
Muzaffarpur	49	4	19	5	11	3	33
Darbhanga	61	3	9	13	5	2	10
North Monghyr	21	15	9	6	21	10	57
Purnea	73	4	1	1	2	1	8
Bhagalpur	59	6	4	8	7	6	26
South Monghyr	43	6	3	2	12	18	24
Patna ...	36	5	7	8	2	23	39
Shahabad	39	13	6	1	3	19	37
Gaya	50	9	4	4	4	15	30

Both Muzaffarpur and Darbhanga are alluvial tracts of the greatest fertility. The district of Muzaffarpur is particularly well watered; it has large expanses of swamp and *jheel* and is crossed by numerous streams running diagonally from north-west to south-east and connecting with the great boundary rivers,—the Ganges, Gandak, and Bagmati. From these streams a good deal of irrigation is carried on, and in the rains they flood the country far and wide. There are certain areas in this district where broadcast paddy is sown under deep water and cut by means of raft as the tract remains under water throughout the whole year. The drawback of the district is that in the north the population depends entirely on the single rice crop, the cultivation of which is so highly developed that its failure results in a heavy calamity over a considerable tract.<sup>2</sup> Saran has a comparatively much smaller area under rice. In fact it has the smallest area under rice and is consequently less susceptible to famine among the four districts of North Bihar. Again, the district of Saran grows an important money crop, viz., sugarcane. The chief source of wealth of the Saran cultivator is his sugarcane and vegetables and, though the net cultivated area in Saran is less than in any other district in the Tirhut Division, the area under sugarcane is more than twice and the area under “fruits and vegetables including root crops” nearly twice as great as in any other of these districts.<sup>3</sup> Darbhanga district resembles Muzaffarpur in many respects. It is an altogether alluvial plain. There are three main river systems which divide the country into three distinct physical tracts. The first tract comprising the Sadr and Madhubani divisions in the north consists mostly of low-lying rice lands, though in the west of Madhubani uplands are found suitable for Rabi crops. The second

<sup>2</sup> Report of the Irrigation Commission, Part II (Provincial), 1901—03, p. 165.

<sup>3</sup> Report of the Census of India, Bihar and Orissa, 1921, Chapter I, p. 22.

portion is the Doab, which is also low-lying and grows rice and to some extent Rabi or lands receiving silt deposits. The third portion, Samastipur, occupies the south of the district. It consists of uplands which grow excellent Rabi crop. The soils are similar to those found in Muzaffarpur.

The measure of agricultural security and density in Bihar is obtained by adding the percentages of the cropped area under *bhadoi* and *Rabi* and deducting that under *aghani*. The following table shows for each natural division the percentage of the net-cropped area under each of the three crops, the index number in the manner suggested and the density of population per square mile.

Natural Divisions	Percentage of net-cropped area under			Index No.	Density
	Rabi	Bhadoi	Aghani		
Orissa	10.1	15.6	81.3	55.6	486
North Bihar	53.8	40.3	46.9	47.2	642
South Bihar	70.8	14.6	41.3	44.1	502
Chota Nagpur Plateau (excluding the States)	14.0	50.4	41.9	12.5	221

The distribution of seasonal crops district by district during the last ten years is given as follows:

		Rabi	Bhadoi	Aghani	Index No.
Muzaffarpur	1914-15	68	33	51	50
	1920-21	70	38	54	54
	1924-25	76	35	63	48
Saran	1914-15	74	34	36	72
	1920-21	70	41	37	74
	1924-25	62	34	31	65

		Rabi	Bhadoi	Aghani	Index No.
	1914-15	34	27	55	6
Darbhanga	1920-21	45	31	59	17
	1924-25	40	26	57	9
	1914-15	43	40	41	42
Champaran	1920-21	55	44	38	61
	1924-25	60	38	41	57
	1914-15	53	35	30	58
Monghyr	1920-21	73	29	28	74
	1924-25	70	22	28	64
	1914-15	40	33	63	10
Bhagalpur	1920-21	37	43	54	26
	1924-25	35	33	56	12
	1914-15	27	44	39	32
Purnea	1920-21	35	45	37	43
	1924-25	38	42	39	41

In the above table Muzaffarpur has a smaller Index No. which indicates less immunity from famine. Rabi area is, however, larger than that of most districts of Bihar. It can thus endure agricultural scarcity better. Its position is second in this respect only to Saran. Its rice, again, is not as unprotected as in other districts. To the north of the Bagmati the country is low and grows paddy for the most part. Champaran is ordinarily blessed with abundant rainfall, but when rainfall is deficient or unevenly distributed, the winter rice crop fails entirely. Three main canals have been constructed and it may be said that with the irrigation facilities now existing the district is practically immune from famine on an extensive scale. Wells are exceedingly few in this district. The reason is the abundance of water available from other sources, lakes, rivers and *jheels* whose water is used in

irrigating the rice fields.<sup>4</sup> The Central Doab grows also a great deal of rice and there is flood irrigation. On the whole we find that the density of population closely follows the percentage areas under *rabi* crops. The South Bihar districts have about half their cultivated area under *rabi* as compared with 75 per cent in case of Muzaffarpur. There is also marked a gradual tendency towards the increase of *rabi* and diminution of *aghani* crops in most of the districts in Bihar. This implies also a corresponding increase of well irrigation. In North Bihar the amount of irrigation is small. In Champaran, for instance, out of a total percentage of 8.6, 2.9 and .1 per cent are irrigated from government canals and wells respectively but 21 per cent is protected and irrigable from the former. The Son Canal is the largest irrigation system in this Province; but it irrigates only about 615,000 acres. The other rivers of South Bihar are too small to feed any canal systems. But these rivers are adequately utilised by the extensive systems of dams and pynes which are in the hands of the landlords. Some of these have lately fallen into disrepair, partly because it was impossible to get the various landlords agree as to the necessity and manner of repairing them, and partly because the commutation of produce rents which has been prevalent in these areas has diminished the interest of the landlords in keeping up the irrigation system while the smallness of the tenants' holdings has prevented active cooperation in this regard.

<sup>4</sup> Sweeney, Final Report on the Survey and Settlement Operations in the District of Champaran (1913—19), pp. 5 and 106.

	Area in acres irrigated from wells				Percentage of area irrigated from wells to net-cropped area.				Normal Rainfall
	1908	1915	1920	1924	1908	1915	1920	1924	
Muzaffarpur ...	18,823	5,070	33,911	30,500	1'60	'83	2'30	2'10	46'4
Saran ...	255,405	261,369	238,292	157,876	20'00	23'00	21'00	13'00	44'4
Darbhanga ...	9,613	2,341	6,700	6,700	'92	'13	'39	'39	50'3
Patna ...	39,967	53,814	73,133	73,133	5'30	5'30	8'60	9'90	43'0
Champaran ...	9,097	...	13,500	6,565	'73	...	'92	'49	53'2
Monghyr ...	12,238	55,499	56,500	56,519	1'60	3'70	3'80	3'50	46'8
Bhagalpur ...	10,316	9,777	9,777	9,752	'85	'61	'63	'61	48'6

The following table shows the sources of irrigation in different districts in Bihar<sup>5</sup>:

		Percentage of various kinds of irrigated area to net cropped area.					Percentage of gross cultivated area which is irrigated.	Total
		From Govern-ment Canals	From Private Canals	From Wells	From Tanks and Ahars	From Other sources		
Muzaffarpur	...	...	06	121	24	41	114	192
Saran	...	...	18	122	42	10	349	192
Champaran	...	29	37	1	30	99	86	8
Darbhanga	...	...	2	40	28	31	47	65
North Monghyr	...	...	...	3	2	21	184	26
South Monghyr	...	...	7	3	20	12		42
North Bhagalpur	...	...	...	2	5	38	133	451
South Bhagalpur	...	...	165	12	55	1281		3601
Patna	...	223	2162	680	2435	493	576	5994
Shahabad	...	2228	383	485	1026	70	442	4192
Gaya	...	429	1596	598	2685	177	494	5183

Gradually artificial irrigation from wells, tanks and private canals forms the main feature of the agricultural practice in Bihar. In the very low-lying rice tracts irrigation is not resorted to at all but the rice on high lands is always irrigated in all parts of Bihar, the water being supplied from ahars. This is the autumn rice (*Bhadoi* or *Aus*) cultivated relatively in high lands which are above inundation level and requires less water but more attention in its cultivation. As a general rule it is sown broadcast in April and May with the first showers of rain, and harvested in July, August and September. Transplanted paddy also grows in such

<sup>5</sup> See Royal Agricultural Commission Report, Vol. XIII, p. 289.

lands and after it is harvested *rabi* is sown. Such lands are generally provided with irrigation works from Ahar connected with *Karhas*. *Bhadoi* occupies the land for a comparatively shorter period than winter rice of which the most important variety is *aghani*, its outturn is generally less and its price lower in the market. But it serves a very useful purpose in supplying a food-grain and fodder at a time of the year when the stock of rice of the previous year is approaching exhaustion. Besides it releases the land in time to be cultivated with a *rabi* crop. Winter rice is cultivated in lower lands where rain water can be accumulated or where irrigation facilities exist. The chief *rabi* crop is wheat and its cultivation depends upon the extent to which the crop is manured and irrigated. The failure of the *hathiya* rain prejudices not merely the winter rice but also the wheat crop in unirrigated areas in most parts of Bihar. On the other hand, the amount and fair distribution of rainfall from June to August determines the outturn of the *bhadoi* and *aghani* crops. There is a further danger of *bhadoi* crops from floods in different parts of Bihar. For *rabi* crops, rain during last week of December or the first week of January is essential and when this occurs the crops are generally full, provided they are not damaged by hailstorm in winter.

The study of the following statistics shows the continuous increase of wheat areas, and of wheat irrigation in most of the districts of Bihar.



	Area under wheat.						Area under wheat that is irrigated.					
	1907-08	1911-12	1914-15	1917-18	1920-21	1924-25	1907-08	1911-12	1914-15	1917-18	1920-21	1924-25
Muzaffarpur	65,000	90,000	84,700	93,800	108,700	120,000	636	3,080	3,060	3,060	19,103	13,000
Saran	57,100	84,200	88,900	89,000	89,500	93,500	53,192	62,307	62,307	62,307	59,519	19,199
Darbhanga	76,500	104,000	105,600	138,300	102,300	69,500	5,523	...	4,600	8,160	1,000	1,000
Patna	105,700	116,700	50,500	63,000	51,400	55,200	149	48,700	47,956	40,931	55,480	44,200
Champanan	88,800	80,900	95,700	113,300	133,500	114,000	652	...	100	298	8,199	3,457
Monghyr	174,300	227,600	237,900	166,800	150,300	200,000	...	12,411	128,495	11,708	14,613	14,613
Bhagalpur	155,000	165,100	165,000	97,900	82,700	84,500	...	2,176	2,176	2,176	30,000	28,170
Gaya	65,400	116,000	163,600	175,000	143,500	151,000	655	47,800	46,301	48,278	46,038	40,408
Shahabad	182,000	211,800	196,000	171,300	163,800	195,900	32,240	85,327	73,240	68,700	104,379	82,900
Purnea	23,800	36,500	40,000	65,000	65,000	54,000	...	...	...	...	...	...

The striking exceptions are Patna and Bhagalpur where the wheat areas have shrunk greatly within the last few years. In Patna the high bank of the Ganges prevents the water that accumulates during the rains from flowing off rapidly and year after year a large tract of the district immediately south of the river becomes a sheet of water. Floods occur and the *rabi* crops are damaged by insect pests and sometimes destroyed over wide areas. In Bhagalpur the decline of cultivation is due to the oscillations of the Kosi which, frequently changing its course, spreads over the land a layer of infertile sand, as well as the scourge of malaria and the famine of 1919. The further extension of the *rabi* area by building dams both for the storage of rainfall and for the safeguarding of the lower parts of a valley as well as by well irrigation may be advocated in districts where it is undeveloped while the latter kind of irrigation may be developed for sugarcane. The latter crop holds a very important place in a district like Saran or Shahabad but in many districts it is still an unimportant crop though with the nature of the soil available its area would readily be extended. Bihar does not reach the standard of sugarcane cultivation found in Ghazipur, Ballia and Gorakhpur.

A comparison of the agricultural seasons and fluctuations of the United Provinces and Bihar shows certain distinctive contrasts and resemblances. In the United Provinces there are, as we have seen, two well-marked agricultural seasons:

*Kharif* (sown, except sugarcane, in June and July and harvested in September to December):

Early dry crops	}	Maize
		Cotton
Rice		
Sugarcane		

*Rabi* (sown in October-November, and harvested in March-April):

Wheat

Barley, gram and mixed food crops.

In Bihar, on the other hand, there are three seasonal crops, *bhadoi*, *aghami* and *rabi*. This is chiefly because Bihar enjoys the advantages of a higher average rainfall than the United Provinces. The annual rainfall averages 49 inches in Bihar, 53 inches in Chota Nagpur and 59 inches in Orissa. In the United Provinces the average rainfall is only 34 inches. Not only is the rainfall more abundant but it is also more regular in the eastern portions of the Plain. The seasonal rainfall also begins much earlier in Bihar than in the United Provinces and thus the rice crop including both early and winter rice is much more dominant in Bihar (19·4 per cent to total area) than in the United Provinces (8·7 per cent). In Bihar and Orissa the *bhadoi* crops which include rice (*aus*) and maize are shown at the commencement of the rains in April and May and harvested in July, August and September. Late and insufficient rainfall at the sowing time or excessive rainfall during the period of growth is unfavourable to the *bhadoi* crops. Floods also cause damage to *bhadoi* crops in Saran, Champaran, Muzaffarpur, Darbhanga and Purnea as well as in the coast districts of Orissa. Vast areas are sown with rice and maize in the Gangetic *diaras* where also the crop is frequently damaged by flood.

As in the United Provinces, good rainfall in September and October ensures a good seed bed for the *rabi* crops. Sowings may be late if the rainfall is delayed but good rainfall even in January and February may improve the crop situation considerably. In the United Provinces wheat is rarely grown after a *kharif* crop in the same year. In fact this is done to any extent in Rohilkhand where it follows early maize. More commonly wheat is grown after a *rabi* crop in the preceding year (i.e., with six months fallow); the preceding *rabi* crop in this case is usually either gram alone or a mixture of crops containing gram or peas. In Bihar, on the other hand, wheat is preceded by maize or *aus* paddy during the monsoon. It is generally sown mixed with gram and a little linseed. After two or three years a crop of peas is taken. The land is generally left fallow during the monsoon and in South Bihar

and Chota Nagpur rain water is banded up for saturating the soil. The water is let off in September and the land prepared for sowing. The *aghani* crop mainly comprises *aman* rice. This is sown in seed beds in May and June and transplanted in the field about a month later and reaped in November and December (*agham*). In Orissa it is more often broadcasted than transplanted. It includes by far the largest number of varieties of rice and occupies the main portion of the rice area of the province. In Orissa and Chota Nagpur where broadcast sowing is most important early showers in March and April are absolutely indispensable for the preparation of lands. But scant rainfall from March to June leads to a great reduction of sowings throughout the Province. The shortage of rain in July and August also retards the process of transplantation, while the deficiency of rainfall in September and October affects the growth of the crop particularly on high and unirrigated areas.

The deficiency in rainfall exposes the districts of the United Provinces and Bihar alike to the loss of the Kharif. As regards the United Provinces wells of any sort are at most a palliative of the effects of drought and the partial protection which alone can be looked for must come from canals. Most of the existing canals in the United Provinces are *rabi* works. The nearest approach to *kharif* canals are those in Rohilkhand and the private canals in Basti district which save the rice in prolonged breaks and after premature cessation of the rains. The question of utilising hill streams for the protection of rice areas and for the general extension of irrigation in the districts east of the Naini Tal Tarai must be taken up in order that *kharif* harvest in this region might be made more secure. The *kharif* area in such districts as Bahraich, Gonda, Basti and Gorakhpur is much greater than the *rabi* and consists almost entirely of rice. There is serious danger here whenever the rain is insufficient because as a rule the failure of the rice cannot be compensated by larger *rabi* as the land cannot be tilled.

The rice harvest in the Tirhut Division depends in the same way though not to the same extent on the early rainfall. The question of using the Himalayan streams and rivers for irrigation and of building embankments is as imperative here as in the eastern districts of the United Provinces. In the United Provinces, the Himalayan streams have been utilised for a magnificent canal system at Sarda. But in Bihar all the rivers except Gandak debouch from the hills on to the plains in the territories of Nepal and hence it is not possible to control these for the purposes of regular canal system. In the districts in North Bihar there is far better dependence upon one crop, namely, winter rice which though important in Gorakhpur and Basti does not eclipse the *rabi* crops. Hence the conditions of agriculture in the former are more precarious, the more so as the pressure on the soil is much greater and would have been still greater were it not for the area occupied by the rivers and marshes. Both in North and South Bihar the well-irrigation is far less adequately developed than in the United Provinces. The reason seems to be that in the rice districts of Bihar wells would probably be of small use for the saving of the rice crop, which requires far more water than they could give; and in ordinary years the rainfall is so ample, and the moisture retained in the soil so abundant, that large areas of sugarcane can be grown without the aid of artificial irrigation. Temporary *kuchha* wells are also common and very inexpensive, the water level being easily reached. There is no reason, however, why more wells should not be built in Bihar as in the eastern districts of the United Provinces protecting the *rabi* crop. The practice of well-irrigation is yet very limited in Bihar, where the peasant seems to be content to rely on the facilities afforded by irrigation canals, at any rate during the *kharif* season. The multiplication of wells is necessary for irrigation during the hot weather and the *rabi* seasons in places where irrigation both from government canals and from *ahars* and pynes is not available. The latter are as a rule meant for the rice crop. In many places, however, owing to the loose

and sandy character of the soil, the construction of wells is difficult and expensive. In this respect the Oudh districts are at an advantage. There 30 or 40 per cent of the net-cropped area is irrigated from wells. A further defect of well-irrigation in Bihar is that the primitive method of lifting water by a *latha* and *kundi* is used here as contrasted with the use of motes and the Persian wheel in the United Provinces. Thus the work is slow and the outturn poor. Again, canal-irrigation in Bihar is on a very limited scale as compared with that in the United Provinces. The only important canal system is that of the Son from which the greater part of Shahabad and small portions of Patna and Gaya receive an adequate supply of water. There are also irrigation works connected with Phalگو, Maihar, Dharda, Poori, etc. Many of the rivers and streams are, however, utilised to the fullest extent for irrigation in South Bihar, although such works are now being neglected by the landlords. Again, where the canal has been introduced, the *ahar* has been abandoned. In areas where there is difficulty of canal irrigation, it would have been more advantageous to retain the *ahars* and fill them with canal water when the demand for water slackens.<sup>6</sup> The effect of the opening of the Son canals will be evident from a comparison of Buchanan's estimates of three thanas in Shahabad district where areas closely correspond to the older administrative divisions.

Buchanan's Estimate, 1812

Corresponding modern thana	Thana of 1812	Total area Sq. miles	Unculturable area	Percentage of culturable but uncultivated area	Current fallow	Cultivated area
Piro ...	Ekwarī ...	3·0	6·3	25·4	6·3	62·0
Bikramganj	Karanja ...	392	6·6	36·5	3·3	53·6
Karghar	Baraoug	356	6·2	20·2	2·8	70·8

<sup>6</sup> See Report of the Royal Commission on Agriculture in India, Vol. XIII, p. 310.

## Modern Statistics, 1909—11

Thana	Total area Sq. Miles	Unculturable area	Percentage of culturable but uncultivated area	Current fallow	Cultivated area
Piro	315	12.05	3.68	1.34	82.93
Bikramganj	365	9.50	5.59	2.37	82.54
Karghar	265	10.00	6.26	1.72	82.02

The expansion of the *rabi* crop in Bihar towards which the recent agricultural practice is tending is possible with the progress of well and tank irrigation. The recent figures show a phenomenal increase of irrigation from wells, tanks and private canals within a very short period.<sup>7</sup>

Bihar has developed an extensive and adaptive system of private irrigation, the cultivators building artificial reservoirs, *ahars* and channels and taking every advantage of the slope of the country to ensure the conservation of water. Tanks are comparatively rare in Bihar. In many areas the natural slope is utilised for the making of *ahars* from which irrigation is effected by means of channels called *pynes*. There is in addition a very large area irrigated from river channels as well as from rain-fed or stream-fed tanks. The greatest development of the former form of irrigation is found in the districts of Gaya and Darbhanga where a system of small channels has proved very useful for agricultural security.

With the expansion of well-irrigation in the *rabi* tracts and the introduction of canal as well as tank-irrigation in tracts which grow more rice than the *rabi* crops there are far greater possibilities of improvement in agriculture and expansion of population in Bihar than in the United Provinces. In the latter province canal-irrigation has almost reached the limit and wells also have reached

<sup>7</sup> Hubback: Final Report on the Survey and Settlement Operations in the District of Shahabad, 1907—16, p. 101.

the maximum number, except in tracts where the subsoil is rocky and the water difficult to get. In Bihar the rainfall is less uncertain and the soil and atmosphere less dry requiring less watering to mature the crops. There is less strain both on cattle power and human resources and the more favourable conditions of agriculture will in the future inevitably lead to far greater aggregation of population than in the western portions of the alluvial plain.





# RELATION BETWEEN CROPS AND RURAL DENSITY IN THE UNITED PROVINCES

BY

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The agricultural security possessed by the different natural regions of the upper Gangetic plain depends so largely on the physical and the chemical conditions of the soil and, above all, on the varying meteorological conditions. In a country where the inadequacy and the uncertainty of rainfall have such far-reaching consequences on agriculture agricultural security is one of the important factors which control the movements of population and it is highly significant that the geographical distribution of population should correspond closely with the amount and distribution of rainfall. In this paper an attempt will be made to examine the problem of density specifically from the point of view of agricultural productivity, and an attempt will be made to show that the environmental factors, viz., the physical and the chemical conditions of the soil and the meteorological conditions determine the high or the low agricultural productivity of the different natural regions by determining the geographical distribution of crops.

Every crop has its own particular range of environment. It finds the most favourable environment in a particular region, and in such a region a comparatively large area sown under this crop as well as its high yield shows that it is an important crop characteristic of that region. But its importance diminishes as the environment becomes less and less favourable until it ceases

to be grown. Thus we observe the varying importance of different crops according to variations in the peculiar conditions of soil and rainfall which constitute the most favourable environments.

But it must be remembered that the differences in the distribution of soil in the different natural regions of the upper Gangetic plain are far less than the differences in the amount and distribution of rainfall. The nature of the soils and their distribution do not differ appreciably from one natural region to another. The natural regions are the different rainfall tracts and within each tract different classes of crops are grown in the different soil regions. But these soil regions are arranged in an almost similar manner in each rainfall tract and although it is no doubt true that the predominance of a particular variety of soil in a particular natural region might increase the importance of a certain class of crops yet, on the whole, the importance of different crops in different natural regions is predominantly due to the climatic factors. Thus, throughout the Gangetic plain loam is the predominant soil. In the neighbourhood of rivers sand predominates, whereas in the depressions the soil stiffens into clay. Each of these soil regions has its own characteristic crops. In the water-logged region the principal staple is rice and the main Rabi crops are usually gram, peas, and barley. On the dry lands between the rivers and the depressions the usual crops such as cereals, pulses, millets, cotton, sugarcane and oil seeds are grown. The river valleys have their distinctive series of crops characteristic of lighter soils, such as Bajra, cotton, and hemp. The arrangement of these soil regions and the characteristic crops grown in each are not much different from place to place. Hence it is rainfall and temperature which really explain the importance of a crop in a particular region, its diminishing importance in other regions and its maximum range of environment. A study of the geographical distribution of crops on this basis is likely to reveal the varying agricultural productivity of the different natural regions.

It is thus important to observe the range of environment and the varying importance of the main crops characteristic of the upper Gangetic plain. Rice, one of the most important staples, requires a mean summer temperature of more than 75 degree to 77 degree. The largest rice regions have an annual rainfall of 50 inches and a rainfall of 5 inches a month during the growing season. It would appear, therefore, that the eastern portion of the Indo-Gangetic plain which receives, on the average, an annual rainfall of 41.77 inches is not so favourably situated in regard to the cultivation of rice as North Bihar or Bengal but the conditions are not very much unfavourable, and, as a matter of fact, the rice crop contributes highly to the agricultural productivity of this region. But its importance diminishes from east to west as the annual rainfall becomes scantier and as the period of high temperature becomes longer until the climatic limit is definitely reached in the southern portion of the middle Doab and the Central India Plateau which is a neighbouring region. In Agra and Muttra, for example, the areas under rice are only 34 acres and 15 acres respectively, and in Jalaun a typical district of the Central India Plateau the area is only 297 acres. In Jalaun the cultivation of rice is rendered impossible as much by the black cotton soil as by the deficiency of rainfall. But in the case of Agra and Muttra the annual rainfall is not more than 25 inches and the rainfall during the growing seasons is not more than 3 inches and it appears therefore that rainfall should be more in order that the cultivation of rice may be possible.

Wheat, another important staple, has an altogether different range of environment. A temperature of 50 degree for four months is regarded as sufficient for wheat cultivation. In the temperate belt the temperature ranges between 50 degree and 68 degree for four months and wheat is grown. "In India the soil temperature at seeding time is very important in the production of winter wheat. When sown too early while the ground is warm plant may start well but will soon decay and be attacked by white ants. It is

considered safe to seed when the temperature of the soil has fallen to about 77 degree but not when it is as high as about 86 degree.’<sup>1</sup> In the Indo-Gangetic plain the proper temperature conditions are satisfied normally. But the moist regions in the east cannot be regarded as wheat-growing tracts because the crop is liable to suffer from rust owing to excessive moisture. Most of the important wheat regions of the world have an annual precipitation of less than 30 inches. In America the successful growth of wheat is not limited by heavy rains but other crops are usually found to be more profitable in regions where the rainfall is heavy. But where the rainfall is 45 inches or more rust and fungus diseases are prevalent. Moreover, a hot and dry climate produces a fine-stemmed plant the grain of which is hard, glassy and rich in nitrogen and a moist climate produces a coarser-stemmed plant with the grains, relatively soft and mealy and poor in nitrogen.<sup>2</sup> In the Indo-Gangetic plain, therefore, the importance of wheat diminishes from west to east with an increase in annual precipitation. But the climatic limit is not reached in the Indo-Gangetic plain. East or Sub-Himalaya East, the predominant rice growing areas. In the former region the annual rainfall is 45 inches and in the latter region it is 47 inches. As a matter of fact wheat is grown in some of the districts of North, East and West Bengal where the annual precipitation is much greater. But the yield is poor because owing to excessive moisture the grain is soft and poor in nitrogen. Hence other valuable crops are grown in preference to wheat and the importance of the wheat crop diminishes with an increase in the annual precipitation. It is thus apparent that the Indo-Gangetic plain west which receives an annual rainfall of less than 30 inches is the typical wheat-growing tract in common with similar regions in America or Australia. In the eastern regions, on the other hand, where the rainfall is heavier wheat

<sup>1</sup> J. Warren Smith, *Agricultural Meteorology*, p. 183.

<sup>2</sup> *Ibid.*, p. 185.

is not grown under the most favourable conditions. As a matter of fact whatever wheat is grown is not pure wheat but is mixed with barley in order to guard against a total failure of crops.

Barley, another important Rabi staple, has a very wide range of environment. In the United States of America most of this crop is grown in cool regions. During the growing season the mean temperature never exceeds 75 degree and it is grown in regions with an annual rainfall of less than 35 inches. In the tropics it is grown in regions where the temperature is higher and annual precipitation is also greater. Although where the rainfall is very heavy there is a danger of rust yet this crop has a remarkably wide range of environment. It is the characteristic crop of the uplands and is grown in light and poor soils. But its importance is greater in the eastern than in the western portion of the plain because it is the chief Rabi staple in the moist rice-growing regions where wheat cannot be raised under favourable conditions.

Maize, another important crop in the Kharif harvest, "so rapidly adapts itself to its surroundings that it is successfully grown over wide climatic ranges."<sup>3</sup> The great corn regions of the world are areas of continental climate characterized by a large range of temperature. Except where irrigation is practised most corn is grown in regions having an annual rainfall of over 20 inches and a summer temperature averaging about 75 degree. In America most intensive cultivation is practised in the region where the mean temperature is from 70 degree to 80 degree and the annual precipitation is between 25 and 50 inches. In the upper Gangetic plain as a whole the rainfall is more than 25 inches and less than 50 inches, the average summer temperature exceeds 75 degree, and the climate too is a continental climate marked by a wide range of temperature. Hence the importance of this crop unlike that of

<sup>3</sup> J. Warren Smith, *Agricultural Meteorology*, p. 145.

crops like rice, wheat and barley is not affected by the climatic limit and consequently it has a very wide range of environment.

In the case of cotton, which is another valuable Kharif crop the conditions of rainfall predominantly affect its geographical distribution in the upper Gangetic plain.

The climatic limit of this crop corresponds with the rainfall line of 35 inches and the regions which receive an annual rainfall of more than 35 inches are unsuitable for cotton cultivation.<sup>4</sup> Thus, little or no cotton is grown in Indo-Gangetic plain, East, Sub-Himalaya, East, Oudh, Central India Plateau and the East Satpuras. Those regions are moist and the soil also is heavy and clayey and unsuitable for cotton. Moreover, "light frequent showers with plenty of sunshine between" produce the best conditions for the growth of cotton; but these conditions are found generally in the western portion of the Gangetic plain. Thirdly, a wet autumn is most favourable for the growth of cotton and it appears that a rainfall of 6 inches in September and October fixes the limit of the geographical distribution of cotton.

Sugarcane, which is another important Kharif crop, requires high temperatures and a constant supply of moisture. It is thus grown in all parts of the Gangetic plain, its importance varying with the facilities of natural as well as artificial irrigation. In Lower Doab and the Central India Plateau little or no sugarcane is grown, its importance is also very small in Middle Doab. The varying importance of this crop in these regions is explained not by climatic factors but by the deficiency or adequacy of agricultural water-supply.

<sup>4</sup> "An over-supply of moisture causes too rank a growth at first deferring the fruiting and causing a development of vegetative limbs instead of the fruiting branches. In the humid regions too much moisture interferes with the development of the plant either by stunting its growth or by causing the shedding of the buds and young bolls."—(J. Warren Smith, *Agricultural Meteorology*, p. 111.)

Just as barley is the main Rabi crop in the eastern portion of the Gangetic plain where rice is the predominant Kharif crop so also Juar is the main Kharif crop in regions where wheat is the main crop in the Rabi harvest. Hence the distribution of Juar corresponds generally with the distribution of wheat but where either rice or wheat or both are relatively unimportant crops Juar together with grain becomes the most important crop. Juar is grown neither in the heavy clay lands nor in the lightest soils. Loamy soil and soil composed of light clay are suitable for this crop. Hence in the eastern portion of the plain barley, which is a more valuable crop, is grown in preference to Juar on these better classes of soil.<sup>5</sup>

Bajra, which is the least valuable of the Kharif crops, is usually grown in poor and sandy soils. The importance of this crop, therefore, gives a very good idea of the extent of the inferior grades of land which a particular tract possesses and it is significant that its importance is very great in only two agricultural regions of the Gangetic plain, viz., South Rohilkhand and Middle Doab.

Gram, another important crop in the Rabi harvest, can be grown successfully on various classes of soil. It is sown on heavy clay lands and it can also be sown in light sandy soils. Hence the range of environment of this crop extends over the whole of the upper Gangetic plain. Its importance is smaller in the eastern portion of the plain because the land is devoted to better classes of crops. In this region it is usually sown as a second crop on the rice-lands. But its importance is considerable in drier regions of the western portion of the plain. In Middle Doab gram is as important as wheat and in Lower Doab and the Central India

<sup>5</sup> Both barley and Juar constitute the cheap food-grains consumed by the poorer classes. In the western portion of the plain Juar is sometimes sown alone and cut green and forms the main fodder crop.



Plateau where the wheat crop is of smaller importance gram is the principal crop in the Rabi harvest.

It is apparent, therefore, that the choice as well as the combination of crops in any region which determines its agricultural productivity is itself conditioned by the climatic factors which determine the range of environment of crops and their varying importance. But, as we have seen, there are crops like gram, Juar and maize which have a very wide range of environment. In the case of these crops their varying importance in different natural regions is not determined by the climatic factors. Whether the contribution of such crops to the agricultural productivity of a particular region is relatively large or relatively small depends on the possibility of selecting other more valuable crops which can be grown under the same climatic conditions. Hence the importance of a crop depends not only upon its own range of environment but also upon the range of environment of other more valuable crops which may be grown in preference to it.

Thus it is important to examine more precisely the varying importance of different crops in different natural regions. More particularly it is necessary to fix our attention upon the variety of crops grown in any region, the choice of more or less valuable staples and their varying importance as regards area and yield in different regions. The choice of crops does not obviously show regional diversities because the crops are those characteristic of a tropical plain. But out of those crops which are common to all the natural regions we shall choose the principal crops to the exclusion of the minor ones. Thus the representative crops selected will be Rice, Wheat, Barley, Juar, Bajra, Maize, Gram, Sugarcane and Cotton. The area under these crops forms more than 75 per cent of the total gross-cropped area and, therefore, comparisons based on the relative importance of these crops will be, for all practical purposes, reliable. The reason why it has not been possible to take into account all the crops is that the returns of yields per acre which are, as we shall pre-

sently see, the primary basis of our comparisons are not available for all the crops which are common to all the districts.

The method by which we can construct indices of the contribution of different crops to the agricultural productivity of different natural regions may be explained as follows:<sup>6</sup>

Firstly, we take the area under any crop, say A, in a particular district belonging to a certain natural region. This area is expressed as a proportion of the cropped area under all the representative crops selected.

Secondly, we obtain the index number of yield. This is found out by dividing the yield per acre of the crop A in that district by the corresponding yield per acre for the whole province as the standard. Now, the district yield may be expressed as a percentage and this percentage may be regarded as the index number of yield.

Thirdly, the results are multiplied. In multiplying the proportion of the area under A and the corresponding index number of yield we take into account:

- (1) The relative importance of the crop A in that district (as indicated by the proportion of the cropped area which is under A); and
- (2) The yield of the crop A in comparison with the provincial standard.

The product which we get is, therefore, an index of the contribution of the crop A to the productivity of the district which we are considering. In this way, we obtain similar indices of the contributions of other crops to the total agricultural productivity of the district and by taking an average of the indices of the contributions of the same crop to the productivity of the different

<sup>6</sup> Cf. Indian Journal of Economics, January 1930—An article on Indices of Agricultural Productivity in Relation to the Problem of Population.

districts belonging to the same natural region we get an average index which indicates the contribution of that crop to the productivity of the entire region. The same process is repeated in the case of other crops and the results are tabulated as follows:—

*Table of the Indices of the Contributions of different crops to the productivity of different regions. The regions are arranged in order of density.*

	Indo-Gangetic Plain, East	Indo-Gangetic Plain, Central	Indo-Gangetic Plain, West
Rice	30.65	23.66	2.50
Barley	24.86	14.20	11.64
Wheat	8.39	17.74	21.95
Juar	3.57	10.73	10.70
Cane	7.19	2.07	3.47
Cotton	...	1.30	6.60
Maize	5.89	3.60	8.48
Gram	13.73	20.00	17.88
Bajra	3.38	7.61	16.15

We have already seen that rice and wheat the two important food crops of the upper Gangetic plain and sugarcane and cotton the two important non-food crops have distinct ranges of environment which depend upon the climatic factors. It is interesting to observe in the table of indices given above the varying importance of these crops from east to west. The contribution of rice to agricultural productivity diminishes from east to west and its importance is insignificant in the Indo-Gangetic plain, West, where the rainfall and the temperature conditions are unfavourable. The contributions of wheat and cotton increase from east to west for the same reason for which the index for rice is low, viz., the comparative aridity of the western portion of the upper Gangetic plain. The contribution of sugarcane also diminishes generally

from east to west because the facilities of natural and artificial irrigation are greater in the east than in the west. The contribution of barley diminishes whereas that of Juar increases from east to west. As already pointed out, barley is the main Rabi crop in the eastern portion of the plain where rice is the main crop in the Kharif harvest and Juar is the main Kharif crop in the western portion of the plain where wheat is the main crop in the Rabi harvest. Thus, as is obvious from the table given above, the importance of barley varies directly as the importance of rice and the importance of Juar varies directly as the importance of wheat. But it must be remembered that Juar can be grown with as much facility as barley in the eastern portion of the plain and the fact that the contribution of Juar to its agricultural productivity is small merely shows that barley which is a more valuable crop is grown in preference to Juar. Like Juar and barley maize is a subsidiary crop which serves as the cheap food of the poorer classes. As it ripens in a very short time "It is of peculiar value as being one of the first crops to come in for food."<sup>7</sup> And "As it is ready for eating early in September when the stock of food saved from the previous Rabi is running low its success is a most important matter." As we shall see later on maize has gradually come into importance as a food crop and as it can be grown successfully over wide climatic ranges it is natural that its importance should be as great in the western as in the eastern portion of the plain. From the table given above, however, it appears that the contribution of maize to agricultural productivity is greater in the western than in the central or the eastern portions of the upper Gangetic plain. This is explained obviously by the fact that in these regions more valuable food crops like barley, or wheat can be grown in preference to maize. The importance of gram seems to be

<sup>7</sup> Moreland, p. 179. Maize is also a staple cereal in Rumania, Italy and Mexico and in the United States of America, and South Africa a certain amount is used for human food.

greater in the western and the central portions of the plain than in the eastern portion. As already noted, it can be grown as well in the heavy clay lands as in the lighter soils. In the eastern portion of the plain heavy clay lands are devoted mainly to rice and gram together with barley is grown as a second crop on the rice-fields. In the western portion of the plain gram is grown on the lighter soils which cannot be devoted to any other more valuable crop. Moreover, gram is the most important crop in those arid tracts of the western portion of the plain where other valuable crops like wheat are of small importance. Hence, on the whole, it may be said that gram is an important crop in those regions where, as in the central and the western portions of the plain, either rice or wheat or both are of smaller importance. Lastly, the importance of Bajra increases distinctly from east to west. It is decidedly an inferior crop which is grown on the worst class of soils and the increasing importance of Bajra from east to west merely shows that there is a deterioration of the soil from east to west.<sup>8</sup>

The nature of the geographical distribution of crops just discussed reveals the relative importance of the three natural regions from the point of view of agricultural productivity and density. It will be observed that the predominantly rice-growing tracts are also the centres of dense population; whereas the western portion of the plain where wheat is the predominant crop has a relatively low density of population. We shall show presently that in the rice-growing tracts the combination of crops is such that the more valuable or heavy yielding crops contribute, to a larger extent, to their agricultural productivity. But apart from these particular local conditions which produce this result the fact that density and the extensive cultivation of rice go together and that the culti-

<sup>8</sup> It is interesting to observe this sort of deterioration of soil from east to west in the case of individual districts lying in the upper Gangetic plain.

vation of wheat goes with a relatively low density is universally true of every other region in the tropics. "Wheat grows in many climates in almost any soil with varying rainfall and with but little cultivation after the seed is once sown. It is, therefore, eminently suited to extensive agriculture particularly in regions of moderate rainfall."<sup>9</sup> Extensive cultivation obviously implies a low density of population. Rice, on the other hand, requires a careful and constant cultivation and is therefore unsuited to extensive cultivation. Even in the fertile lands of the deltaic regions where there are excellent facilities of irrigation rice cultivation requires a large labour supply for the preparation of the seed-beds, transplantation and other agricultural operations. It is significant that the importance of transplanted rice is greater in the eastern portion of the upper Gangetic plain, whereas whatever rice is grown in the western portion is mostly late rice the cultivation of which requires a smaller labour supply. It is, therefore, natural to expect that the cultivation of transplanted rice should go with a high density of population. Moreover, the yield of rice per acre is very high relatively to the yield of any other food crop and, as Rudmose Brown points out in his 'Principles of Economic Geography,' "The abundant return accounts for the great density of population in such lands as the river plains and deltas of the Ganges, the Yangtse, the Hoang, the Si, the Mekong, etc."<sup>10</sup> Then again, wheat with its one crop cannot obviously support as many people as rice can with its possible three crops a year. It may be argued that rice diet is deficient in protein and nitrogen. But this deficiency is made up by the consumption of beans, peas or other cereals and vegetables which are rich in them. Hence

<sup>9</sup> Indian Journal of Economics, Vol. IV, Part I, p. 6. An article on Economic Geography, by H. W. Lyons. Prof. Carver says, "while wheat is an important crop in the world's commerce it is a poor one from the point of view of intensive farming" (Principles of Rural Economics, p. 157).

<sup>10</sup> Rudmose Brown, Principles of Economic Geography, p. 40.

it is possible for rice cultivators to subsist on a vegetarian diet rather than a mixed diet of cereals and meat. The result is that land is devoted exclusively to crops and not partly to stock-raising as in the wheat regions of Europe, America or Australia. As Professor Carver says, "The nutriment in the grain required to fatten a beef animal under present conditions is usually much larger than that of the beef produced, to say nothing of the other things consumed by the animal. Again, the land required to pasture a beef animal for a year would, if put into grain or vegetables, yield a great deal more food than that of the beef which the animal will add to his carcass."<sup>11</sup> Hence it is natural that land in the rice-growing regions is capable of supporting a higher density of population. Now in the case of the non-vegetarian population of the rice-regions of the tropics the deficiency of a rice diet in protein is compensated by the consumption of fish which is found in abundance in the numerous rivers and streams of these regions. Hence the high yield of rice per acre supplemented by the yield of the fishing industry is capable of maintaining a comparatively large density of population.

But apart from these general causes which explain how the density of population varies directly as the importance of rice the combination of crops in the rice-growing regions is such that the more valuable crops contribute, to a greater extent, to their agricultural productivity. Firstly, it is interesting to observe the relative importance of the eastern and the central portions of the plain from this point of view. We have seen that the importance of barley varies directly as the importance of rice and that of Juar varies directly as the importance of wheat. It appears from the table given above that the combined index for rice and barley is 55.51 in the case of the Indo-Gangetic plain, East, and only 37.86 in the case of the Indo-Gangetic plain, Central. But in the latter region wheat and Juar are more important crops than in the former

<sup>11</sup> Carver, *Principles of Rural Economics*, p. 163.

region and naturally the combined index for wheat and Juar is 28.47 in the case of Indo-Gangetic plain, Central, and only 11.96 in the case of the Indo-Gangetic plain, East. If we take the rice-barley index together with the Wheat-Juar index the two regions obviously stand almost on the same level. But it must be remembered that Juar is distinctly inferior to barley and, as already explained, the fact that the importance of Juar in the eastern portion of the plain is small only shows that barley which is a more valuable and heavy-yielding crop is grown in preference to Juar. Hence although the index for Juar is high in the case of the Indo-Gangetic plain, Central, yet the importance of barley in the case of the Indo-Gangetic plain, East, is of great significance. Secondly, the contribution of sugarcane, a valuable commercial crop, to agricultural productivity is considerably larger in the Indo-Gangetic plain, East, than in the Indo-Gangetic plain, Central; and although the latter region has an advantage over the former in respect of cotton yet taking sugarcane and cotton together the balance of advantage is in favour of the former. Thirdly, maize, which together with barley constitutes the food grain of the people, is a more important crop in the Indo-Gangetic plain, East, than in the Indo-Gangetic plain, Central. Lastly, gram and Bajra, the two inferior crops, make greater contributions to agricultural productivity in the case of the Indo-Gangetic plain, Central, than in the case of the Indo-Gangetic plain, East. This is natural in view of the fact that gram which can be grown in heavy as well as light soils is substituted by other more valuable crops in the Indo-Gangetic plain, East, whereas the importance of Bajra is a distinct indication of the comparatively large extent of inferior soil in the Indo-Gangetic plain, Central.

Now when we compare the eastern and the central portions of the plain with the western portion from the point of view of the choice of more valuable staples we find that the more valuable cereals contribute, to a smaller extent, to the agricultural productivity of the western portion. The contribution of wheat to agri-



cultural productivity is greater in the case of this region because, as already explained, the climatic factors are favourable to wheat cultivation. It is also remarkable that the contribution of rice is insignificant when compared to what we find in the eastern and the central portion of the plain. But it will be observed that the importance of wheat in this region is not much greater than its importance in the central portion of the plain; whereas rice makes a very substantial contribution to the agricultural productivity of the central portion. The importance of barley, too, is greater in the central portion of the plain than in the western portion; while Juar is equally important in both. Thus, on the whole, the predominance of rice and barley in the case of the central portion of the plain is significant and is balanced by the importance of wheat in the western portion only to a very small extent. In respect of sugarcane and cotton, the two commercial crops, the Indo-Gangetic plain, West, is in a more advantageous position. But this does not seem to outweigh the advantage which the central and the eastern portions of the plain possess in regard to the important tropical cereals. The predominance of maize and gram indicates only that the land devoted to these crops cannot be devoted to more valuable crops like Juar, barley and wheat. Moreover, the predominance of Bajra, as already explained, is merely an index of the extent of inferior soil. As a cheap food-grain it is distinctly inferior to maize, barley or Juar and its importance must be regarded as a sign of agricultural distress.

A study of the problem of density from the point of view of the choice and combination of crops will not be complete if we do not consider the reaction of the increase of population upon the utilisation of land. In the agricultural countries of the West, specially in America, the choice of crops has been modified by the increasing pressure of population upon the soil and this change has manifested itself in certain well-defined tendencies. Prof. Carver says that "The growing scarcity of land and the increasing supply of labour have brought about a certain amount of substitu-

tion of heavy-yielding for light-yielding crops."<sup>12</sup> Thus, there had been a decrease in the proportion of land devoted to small grains with the exception of two-row barley and oats because the production of small grains is unsuitable to intensive farming. In America there has been a gradual shifting of the wheat belt owing to the fact that wheat, although an important commercial crop, is a light-yielding crop suitable to the methods of extensive farming. On the other hand, there is an increasing tendency to devote the land to the production of not only forage crops for dairy use such as hay, grasses and clover but also heavy-yielding root-crops such as potatoes, sugar-beets, turnips, stock-beets, etc., which yield, a high return per acre to a correspondingly high expenditure of labour and capital. Moreover, there has also been an increase in the proportion of land devoted to truck-farm produce such as beans, onions, lettuce, tomatoes and other garden vegetables because these are all heavy-yielding crops.

It is interesting to observe how far the increasing pressure of population upon the soil in the upper Gangetic plain has produced this characteristic change in the direction of intensive subsistence farming by leading to a substitution of heavy-yielding or more valuable crops. In the eastern portion of the plain the most important crop grown is rice which is, *par excellence*, a heavy-yielding crop. It is natural, therefore, to expect that wherever possible there should be an increase in the area under rice. Cultivation has extended in this region by the reclamation of swamps and *usar* lands. These reclaimed lands have been devoted mostly to transplanted rice. Moreover, the statistics of cultivation also show an increase in the area under early rice which is highly significant. Where the Kharif is harvested at an early date it is always an easy matter to sow a second crop in good time. Hence intensive cultivation of land by means of double-cropping is possible in the case of land which is devoted to

<sup>12</sup> Carver, Principles of Rural Economics, p. 158.

a Kharif crop like early rice. Thus early rice is not only a heavy-yielding crop itself but it also indirectly contributes to agricultural productivity by making double-cropping possible; and it is but natural that early rice should be substituted for other light-yielding crops. The development of the practice of double-cropping as a result of the increasing pressure of population upon the land has naturally led to an increase in the area under the cheaper varieties of Rabi grains. Thus, the area under gram and peas shows a remarkable increase in all the districts situated in the eastern portion of the plain. In Jaunpur, for example, the area under gram was four times as large in 1908 as in 1841 and that under peas increased from 25,000 acres to 81,373 acres or 21.58 per cent of the total cultivated area between 1841 and 1908. In Benares the area under peas increased from 18,418 acres in 1878 to 50,476 acres in 1908. Peas ripen early and the stalks are used for fodder. Hence it is natural that peas should constitute an extremely popular staple in the whole of this region. Another remarkable feature is the rapid development of the cultivation of maize. In Jaunpur, for example, the area under maize increased from 57,000 acres in 1899 to 83,500 acres in 1906. It is a valuable crop and by reason of its early maturity tends to increase the agricultural security of a district. Moreover, it provides the cultivator with sufficient food till December and thus enables him to sell most of the Rabi crops. It is also significant that there has been a large increase in the area under barley the most important heavy-yielding crop in the Rabi harvest. In the eastern portion of the plain wheat requires a better soil, more manure and preparation, and more careful attention than barley. Moreover, it is susceptible to rust in the damp weather. On the other hand, the outturn of barley on average land has been estimated to be about 25 maunds per acre and that of wheat to be one-fifth less. Barley has, moreover, been adopted universally as an article of food and to the cultivator who keeps as much food-grain as he can for his personal consumption while he raises none for cash payments from other commercial crops a larger

outturn is a more important consideration. Hence it is natural to expect that as a result of the increasing pressure of population upon the soil barley should substitute wheat, Juar and other light-yielding crops. It is also to be noted that this tendency to grow as much of heavy-yielding food-crops as possible is indicated by the decrease in the area under sugarcane the important commercial crop of this region. In Gazipur the area under sugarcane diminished from 36,196 acres in 1879 to 26,500 acres in 1908. In Benares the area under this crop decreased from 41,223 acres in 1840 to 20,677 acres in 1908. In Jaunpur this area decreased from 81,436 acres in 1841 to 40,622 acres in 1908. This decrease is due no doubt to the relative rise in the price of agricultural produce and the competition of beet and other imported sugar. But it must be remembered that the practice of double-cropping which has developed a great deal as a result of the increasing pressure of population upon the soil has also affected the area under this crop. This crop remains on the land for the greater part of the year and is not reaped till Spring. Moreover, it requires long fallowing and a good deal of expenditure and the attendant risks also are, by no means, small. Hence it is natural that the cultivator now prefers to grow maize or rice instead of sugarcane and then to sow a Rabi crop on the same field thus obviating the necessity of long fallowing. In this way he makes a more intensive use of his land which is necessary in view of the increasing pressure of population upon the soil.

The same fundamental tendencies can be discovered in the process of agricultural development in the central portion of the plain. Thus, in almost all the districts of Oudh which forms the upper portion of this region we find a remarkable increase in the area under rice. In Partabgarh, for example, the area under rice was 60,706 acres, nearly one-third of the area under the Kharif harvest in 1863. By 1893 the area had more than doubled itself and since that year there has been a further increase. In Sultanpur the area under rice was only 133,000 acres in 1864 but by

1893 the area had increased by 100 per cent. In Fyzabad the area under rice increased from 107,500 acres in 1865 to 269,315 acres in 1904. In Barabanki the area under rice increased from 27 per cent of the total cultivated area in 1866 to 48·08 per cent of the total cultivated area in 1904. This increase has taken place by the extension of cultivation to the poorer lands which are only capable of bearing a single crop of rice, as in the Indo-Gangetic plain, East. In this region, too, double-cropping in the rice-lands has become more and more extensive and there has been a very large corresponding increase in the area under gram and peas, the cheaper varieties of Rabi grains which are grown on rice-lands in winter. In Fyzabad, for example, the area under these crops has increased by 250 per cent and now covers 47 per cent of the area under the Rabi harvest. Then again, as in the eastern portion of the plain, there has been an increase in the area under maize. In some of the districts, in Barabanki, for example, this increase is due to the substitution of maize for Juar which is an inferior crop. But where this has not been possible Juar has maintained its importance as a cheap food of the poor and the area under the crop has increased with the increasing pressure of population upon the soil. Moreover, there has been an increase also in the area under Kodon and Mandua, two other cheaper food-grains. As already pointed out before, the climatic conditions in this region are not unfavourable to the cultivation of wheat and hence its importance is greater than that of barley. It is natural, therefore, that the area under wheat should have increased since the middle of the nineteenth century. But what is more significant is that formerly wheat was mostly mixed with either gram or barley; but the increasing pressure of population has led to the substitution of pure wheat for mixed wheat which has always a lighter yield. In Lucknow, for example, the areas under pure wheat and mixed wheat were 64,000 acres and 24,500 acres respectively in 1893; but in 1902 it was found that the former had increased but the latter had remained the same. Lastly, the area under sugarcane has diminished, as in the eastern portion of the plain, for the

reasons explained above. It is likely that it has been substituted by other heavy-yielding or more remunerative crops and it is interesting, in this connection, to note that there has been an increase in the area under cotton which has recently become a more important commercial crop than sugarcane.

In the lower portion of the Central Gangetic plain we find similar tendencies of agricultural development. The areas under the Kharif grains such as Juar, Bajra and rice have increased partly as a result of the extension of cultivation and partly at the expense of sugarcane and cotton.<sup>43</sup> In Fatehpur, for example, the area under Juar increased from 72,991 acres at the time of the first settlement to 110,916 acres in 1915. The area under Bajra increased from 22,372 acres to 50,685 acres within the same period. In Fatehpur the area under rice has not increased but there has been an increase in the area under wheat as a result of the development of canal irrigation in the Jumna tracts. In Allahabad, on the other hand, the area under rice has increased but that under wheat has maintained itself. But it must be noted that the importance of wheat in this region is small as compared with that of other crops. It is also remarkable that pure wheat has supplanted mixed wheat in this region also. Thus, in Fatehpur the area under pure wheat has increased from 38,213 acres at the time of the first settlement to 45,707 acres in 1915. The most important crop in the Rabi harvest is, however, barley which is mixed with gram or peas. The areas under all these crops have increased remarkably. The increase in the area under gram and peas is obviously due to the development of the system of double-cropping; while the increase in the area under barley has been due to the fact that wheat cannot be grown under favourable conditions in this region and barley serves as the food-grain of the people. It is also significant that the areas under cotton and sugarcane

<sup>43</sup> It is probable that this is a sign of more intensive subsistence farming necessitated by the increasing pressure of population upon the soil.

have diminished and these crops have been substituted by heavy-yielding food-crops.

In the Indo-Gangetic plain, West, the increasing pressure of population has also been accompanied by an increasing importance of either heavy-yielding food-crops or valuable commercial crops or both. This region is predominantly a wheat-growing region and the development of canal irrigation has led to an enormous increase of wheat cultivation in almost all the districts belonging to this region. In Meerut, for example, the area under pure wheat increased from 270,000 acres in 1860 to 327,500 acres in 1904; whereas the area under mixed wheat also increased from 70,000 acres to 120,650 acres within the same period. In Bulandshahr, which is another district of the upper Doab, the area under pure wheat did not increase in the same period but there has been a marked increase in the area under wheat mixed with barley and gram and this is a sign of intensive farming because this increase has been at the expense of pure barley which is certainly inferior to wheat. Lower down the Doab region, in the district of Etah, for example, there has been also a very large increase in the area under wheat, because canal irrigation has opened up the precarious tracts and the wet cycle of 1885-89 also gave an impetus to the increase of wheat cultivation. But it is remarkable that, as in the eastern and the central portions of the plain, the increasing pressure of population upon the soil has led to the increasing cultivation of the cheaper varieties of Rabi grains by more and more extensive double-cropping so also in this region the tendency has been towards the increasing cultivation of the cheaper varieties of Kharif grains by the same process. We find in this region an enormous increase in the area under wheat mixed with barley, gram or peas. Now wheat alone is almost invariably sown after a fallow; while a mixed crop, at least in a good irrigated land, is a sure sign of double-cropping. Hence this increase in the area under mixed wheat is significant of the tendency to increased cultivation of the cheaper heavy-yielding Kharif grains like maize, rice and other staples which early attain maturity and enable the

cultivators to sow a second crop of mixed wheat in the same season. Rice, as we have seen, is an unimportant crop in this region. But its cultivation has increased wherever and whenever the natural conditions are favourable.<sup>44</sup> There has also been a remarkable increase in the area under maize as it is the most profitable of unirrigated crops and is very little affected by the early cessation of rain. In Meerut, for example, the area under maize increased from 46,680 acres to 129,500 acres between 1860 and 1902. In Bulandshahr the area under maize increased from one-third of the Kharif area to one-fourth in roughly the same period. In Etah the area under maize was five times as large in 1911 as it was at the end of the last century. Another remarkable tendency is the increase in the area under Juar. This increase has taken place at the expense of the area under Bajra which is a distinctly inferior crop. Now, although Juar is a more remunerative crop yet it is more delicate and requires better irrigation or else a better soil. But the development of canal irrigation has made it possible to grow Juar in sandy soils where Bajra was formerly grown. The area under barley has diminished owing to the increasing substitution of wheat for barley. Where irrigation is available it is no good sowing a less expensive crop than wheat and where unirrigated wheat can be grown it is also a bad policy to sow barley. Hence the cultivation of pure barley has diminished a great deal in all the districts of this region. In Meerut, for example, the area under barley diminished from 58,800 acres to 40,500 acres between 1860 and 1902. In Bulandshahr this area shows a decrease of 70,000 acres since 1882. In Moradabad the cultivation of barley is now confined to the arid Bhur tracts which cannot bear any other better crop. But the most remarkable tendency in this region is the increase in the area under sugarcane and cotton, the

<sup>44</sup> In Etah, for example, the area under rice in 1911 was one and half times as large as it was in 1873. In Meerut, again, the area under rice increased from 17,000 acres in 1860 to 35,000 acres in 1895 as a result of the wet cycle,



two valuable commercial crops, as a result of the development of canal irrigation. In Meerut the area under sugarcane increased from 73,643 acres in 1860 to 115,411 acres in 1902. In Bulandshahr the area under sugarcane increased from 10,492 acres in 1882 to 33,655 acres in 1902<sup>15</sup> There has also been an enormous increase in the area under cotton. This increase is due partly to the unremunerative character of sugarcane cultivation. The increasing cultivation of cotton is significant not merely because it has become a more remunerative crop but also because it has increased the agricultural security of this region. Cotton is less affected by drought than any other crop and is, therefore, a source of agricultural stability. Thus during the famine year of 1913-14 stress was laid by the district agricultural officers of Agra and Muttra on the fact "That one of the principal causes that so little signs of distress were shown in these two districts in spite of the failure of food-crops on unirrigated land was the comparative excellence of cotton."<sup>16</sup> It is, therefore, a sign of agricultural progress that the area under cotton has been increasing in recent times in districts which are outside the regular cotton-growing area.

<sup>15</sup> The area has gone on increasing. In 1925 the area was 62,189 acres almost all of which was irrigated.

<sup>16</sup> Crop and Season Report of the United Provinces (1913-14), p. 4.

# OPTIMUM TAXABILITY

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## I

The object of this article is to examine the concept of taxable capacity and to suggest another in its place which seems more satisfactory.

“Taxable Capacity” has been used to imply three different things:—

- (a) absolute taxable capacity,
- (b) the relative contributive capacity of two or more nations to some common expenditure, and
- (c) comparative tax burdens in different countries.

We are concerned only with the first.

Stamp in his “Wealth and Taxable Capacity” attempts a first approach which consists in finding out the difference between the annual national income and the aggregate minimum of subsistence of the people. He then suggests certain other factors which should be taken into account.

Findlay Shirras in a paper read before the Royal Statistical Society (Statistical Journal, 1925) defined Taxable Capacity as “the total surplus of production over the minimum of consumption required to produce that volume of production, the standard of living remaining unchanged.” (The rest of the paper has very little to do with the analysis of this definition and is devoted to a study of the comparative burdens of taxation in different countries or rather the ratio between income and amount of tax per head in them.)

Stamp's first approach helps the economist very little. The aggregate minimum of subsistence is a physiological limit and is certainly below the economic minimum, i.e., the level, a reduction of income below which is accompanied by loss of productive capacity. Only over short periods and during times of extreme national emergency, e.g., wars, are we concerned with the minimum of subsistence. Taxable capacity, as it concerns the economist, may be far smaller than the quantity suggested by Stamp's definition.

The other factors suggested by Stamp<sup>1</sup> do not take us any nearer the concept. In fact it is hard to relate them logically to the first approach. Having found the difference between the annual national income and the aggregate minimum of subsistence, how are we to modify it from the point of view of inequality in the distribution of wealth and incomes, the way of raising tax money, etc.? These factors indeed suggest that Stamp had at the back of his mind some minimum other than the physiological minimum of subsistence. But they do not lead us beyond the first approach.

Shirras's definition seems at first an improvement upon Stamp's. The minimum of consumption which he had in view is an economic minimum in the sense that it is necessary to the maintenance of the total national production.

There is a second part of Shirras's definition. According to him not only the total national production but also the existing standard of living of the people should be maintained. The reason for the separate emphasis upon the minimum of consumption and the standard of living does not seem clear. The standard of living either is, or is not the same as the minimum of consumption. If the two are different, as is usually the case, taxable capacity is the difference between total national production and the higher of the two. In most communities the standard of living is higher than the minimum of consumption and hence we may define taxable capacity as the difference between total national production and the aggregate standard of living of the people of the country.

<sup>1</sup> *Wealth and Taxable Capacity*, p. 118.

This definition is open to several objections:

(a) In the first place, it assumes the standard of living of any particular year, e.g., 1914, as the standard which must be maintained. But there is no economic sanctity attaching to the particular standard of living. The long period economic interests of the people may require a reduction in its existing standard of living, i.e., a lower standard of living may be necessary at present in order to ensure a better average standard over a long period or the same average over a longer period than can be realised if the existing standard is sought to be maintained. Either the standard of living of the whole population may have to be lowered and its standard of saving raised, or the standard of living of a particular section, e.g., wage-earners may require cutting down in order to facilitate the adjustment of their income level to the conditions of industry. The state as representing the permanent interests of the community is intimately concerned with this question.

(b) In the second place, what Shirras seeks to maintain is the standard of private expenditure and not the standard of living of the people. In practice the two may not be far apart. But in theory they are different; for the real standard of living of a community depends not only on its private expenditure but also on its public expenditure, and there is no justification in theory for the maintenance of the standard of private expenditure as against the scale of public expenditure. In fact the increasing importance of public expenditure of an economic nature calls for a different way of measuring the standard of living of a people from the old one of adding up items of expenditure in private budgets.

The redistribution of a community's income by taxation and public expenditure, apart from the reactions to collection and distribution of tax money, affects the community's real standard of living mainly in two ways.

(i) The standard of all classes may be affected. A portion of the communities' income which might have been saved and invested, i.e., spent in capital goods to pro-

vide for increase of income in future, may be taken away by taxation and invested in the provision of immediately consumable things or conversely.

- (iii) It may affect the standard of living of one class relatively to that of another, and this either directly, where a portion of one class's income is transferred and added to the income of another class, and/or indirectly, where government expenditure competes more with the private expenditure of one class than of another.

The "Standard of living" cannot, therefore, supply us with an invariable criterion in theory by which one can define the taxable capacity of a nation. There is no one standard of living, or rather, standard of private expenditure, which has in theory any special sanctity, and even if there is one, it is likely to be constantly modified by taxation and public expenditure.

The standard of living method of measuring taxable capacity is a relic of the influence of individualistic philosophy on public finance. The idea was that the state should take away as little as possible from private pockets and thus cause the minimum of disturbance to the distribution of private income and expenditure. The modern state has, however, come to play an important role in the economic life of its citizens, or rather, the importance of such role is now well recognised. Hence our approach to problems of public finance must also be modified in recognition of this change.

## II

In discussing any problem of public finance the economist's sole standard of guidance is its relation to the economic welfare of the community. Where, as in public finance, the problem is studied from the point of view of the community as a whole, the best method of proceeding is first to assume the community as a unitary organisation where the civic sense is so highly developed that an addition to the welfare of any of its parts would be regarded by its members as a cent per cent addition to the welfare of

the whole, and then to make allowance for conditions in the actual world according to the intensity and pervasiveness of this civic sense in different communities.

These assumptions underlie our discussion of the new concept of the Optimum taxability of a nation. We might define it as indicated by the amount of tax-money the raising and spending of which in the best ways possible maximises the economic welfare of the community.

On analysis, this definition is seen to contain three variables,

- (a) the amount of tax-money,
- (b) the way of raising it, and
- (c) the way of spending it.

Given the amount of tax-money  $A_1$  in consideration, there may be a number of ways  $T_1, T'_1, T''_1$ , in which it can be raised in a given community.

To each way, e.g.,  $T_1$  of raising the sum again, there may be appropriate several ways, e.g.,  $E_1, E_{1_2}, E_{1_3} \dots$  of spending it. For the sum  $A_1$ , therefore, there may be several combinations of the way  $T_1$  of raising it with the ways  $E_1, E_{1_2}, E_{1_3}$  of spending it. Of these combinations one say  $T_1 E_{1_3}$  (or more) may be the best, i.e., given the amount  $A_1$ , if it is raised in way  $T_1$ , the greatest addition to economic welfare or the least deduction from it would result if the sum is spent in way  $E_{1_3}$ .

Similarly there may be best combinations for the other ways  $T'_1, T''_1, T'''_1 \dots$  of raising the sum  $A_1$  with their appropriate ways of spending it.

Then there would be one (or more) of these best combinations which would be the ideal combination for the sum  $A_1$  of tax-money, i. e., the best of all the best combinations for  $A_1$ .

Next there are similar ideal combinations of the ways of raising and spending for other and different amounts of tax-money  $A_2, A_3, A_4 \dots$

Finally, there is an amount  $A_n$  the ideal combination for which is also the best of all ideal combinations for all amounts. This represents the optimum taxability of a nation.

Given the psychology of a people its optimum taxability would vary with,

- (a) the size of its national income—absolutely, though not necessarily in proportion to the national income—,
- (b) the evenness or otherwise of the distribution of private incomes, and
- (c) the distribution of total national income between private and public expenditure, i.e., even if private incomes were absolutely equal, there would still be a case for taxation in order to secure expenditure in ways which may be desirable for the community as a whole and yet not attractive enough for private individuals.

In the actual world *non-economic factors* influence the raising and spending of tax-money. That is to say, there are non-economic limits to the ways of raising and spending any sum of tax-money. These limits may operate to rule out the economically best ways of raising and spending tax-money, and hence the best combinations of such ways and hence, lastly, the amount which may be indicative of a nation's optimum taxability. That is, the optimum taxability of a nation taking into consideration the various non-economic factors that affect public finance is different from and also less than its optimum taxability in theory.

This is the central concept in the theory of public finance. In fact the whole theory of public finance is only an analysis of this concept into its minor concepts.

The concept shows the intimate relation which exists between the two branches of public finance, viz., taxation and public expenditure. The two can indeed to a certain extent be treated separately; for there are certain general principles which govern the ways of raising and of spending tax-money respectively. But no final

judgment can be passed upon any large item of public revenue and public expenditure until it is viewed in relation to the general scheme of public finance.

In that general scheme public expenditure occupies as important a place as taxation. There are different competitive ways of spending tax-money. These ways vary according as the amounts of tax-money and the ways of raising them vary. Then there are different reactions on the part of the community to different amounts and ways of spending public money. A comprehensive treatise on public finance would include a study of these reactions as much as it does the effects of different schemes of taxation.





# A STUDY OF SOME VITAL PROBLEMS RELATING TO THE WORKING CLASS POPULATION OF BOMBAY

BY

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In the year 1930 the Bombay Labour Office, in collaboration with the Young Women's Christian Association, conducted an enquiry into infant mortality among working-class persons in Bombay City. For this purpose a schedule was prepared which is subjoined as Appendix A. 2,338 such schedules were collected out of which 2,053 were accepted for tabulation, and a report thereon was published in the January 1931 issue of the *Bombay Labour Gazette*. An examination of the report showed that certain data had been collected in the course of the enquiry which, although not strictly relevant to the purpose the Labour Office had in view, were nevertheless valuable for a study of some vital problems relating to the working-classes of Bombay City. The Director of Information and Labour Intelligence was, therefore, approached by the writers of this paper with a request to permit them to extract from the schedules the data in which they were interested. The Director readily complied with this request and the writers are very grateful to him for his compliance.

Before proceeding with the examination of the results obtained, it would be desirable to specify the class of persons to whom the figures relate.

The Labour force in Bombay is composed mainly of agriculturists hailing from the Konkan.<sup>1</sup> Although working in the city, they usually do not lose complete touch with the villages to which they belong and it is not unusual for them to visit their homes at least once if not more often during the course of a single year. Speaking generally, they cannot be regarded as living in great comfort, because, as published statistics<sup>2</sup> on the subject show, the average family income per month comes to a little over Rs. 50 and 97 per cent of the families live in one-room tenements, which are generally dark and ill-ventilated. As a class they are illiterate, ignorant and superstitious and do not readily take to new ideas. They are proverbially in debt and the social and intellectual amenities which they can enjoy are limited in number. The working wives and mothers are in this respect worse off than the males. For, in addition to doing domestic work they have to spend eight to ten hours in a factory.

In the following paragraphs an attempt is made to analyse and discuss

- (1) The age of mother at birth of first child,
- (2) The age of mother at birth of last child in cases of married women of ages 35 and above,
- (3) The intervals elapsing between consecutive births, and
- (4) The average fertility per marriage.

### **Age Distribution.**

An idea of the age distribution of the women considered for the present study will be helpful to the proper understanding of the problems discussed below. The following table gives the age distribution of 2,299 women whose ages were recorded in the schedules.

<sup>1</sup> Bombay Labour Gazette, Vol. IX, p. 458.

<sup>2</sup> Working class budgets, Bombay, Report of the Bombay Labour Office, pp. 10, 23. A subsequent inquiry by the Bombay Labour Office shows that 73 per cent of the families live in one-roomed tenements.

TABLE 1.

Age-group.	Number of cases.	Percentage to total.
15—20	598	26
21—25	547	23·8
26—30	525	22·8
31—35	259	11·3
36—40	235	10·2
41—45	77	3·4
Above 45 <sup>3</sup>	58	2·5
	2,299	100·00

A comparison of these figures with those for the whole population obtained at the 1921 Census of Bombay City shows that there is a preponderance, in the sample considered, of women under 35. This is natural in view of the fact that the class of the community considered migrate to the towns for work between the ages of 18—25 and return permanently to their homes in the villages fairly early, either due to illness, incapacity or exhaustion or because they have accumulated some money.

### **The Age of Mother at Birth of First Child.**

In 1667 schedules data for ascertaining the age of the mother at the birth of her first child were available. It is seen that the average age of the mother at the birth of her first child is 18·5. This figure would appear to be much higher than is generally believed, especially in view of the prevalence of the system of early marriage in the class of the community to which this sample relates. But it may be pointed out here that although marriage takes place

<sup>3</sup> The highest age recorded was 60.

at a very early age, sometimes even in the cradle, owing to the prevalence of certain social customs and religious rites, it does not become effective till some time after puberty. This is especially so in the case of the working classes other than the so-called Depressed classes. The first birth considered here includes also the still-birth although it excludes miscarriages which were not recorded in the schedules. The figure 18·5 appears somewhat reassuring in so far as it tends to show that early maternity which necessarily means an early strain on the mother's health is not so rampant as is generally thought.

The following table gives the frequency distribution of the age of mother at birth of first child.

TABLE 2—FREQUENCY TABLE SHOWING THE AGE OF MOTHER  
AT BIRTH OF FIRST CHILD.

Age of mother	No. of cases	Percentage to total
9—13	82	4·9
14—18	856	51·3
19—23	591	35·5
24—28	124	7·5
Above 28	14	0·8
	1667	100·00

*(Average age of mother at birth of first child comes to 18·5)*

So far as is known, no figures are available indicating the age of Indian women at which reproduction ceases. It is generally believed that menopause is reached at the age of about 45. Such expert opinion as is available on the subject, however, indicates

that reproductive capacity of Indian women is exhausted much earlier than menopause.<sup>4</sup>

In order to see how far this conclusion is borne out by the figures collected by the Labour Office, an attempt is made to analyse the data relating to married women of ages 35 and above. The number of schedules which contained such data was 256, and the following table presents the data contained therein :

TABLE 3—AGE OF MOTHER AT BIRTH OF LAST CHILD.

Age of woman in 1930	No. of cases	Average age at birth of last child
35	79	29·5
36	16	31·9
37	10	29·3
38	30	32·2
39	5	34·0
40	46	50·3
41	1	36·0
42	11	33·2
43	2	20·5
44	5	34·8
45	17	28·3
46	2	28·5
47	4	28·8
48	5	26·2
49	5	26·2
50	5	31·0
52	3	31·7
55	8	27·6
57	2	25·5
	256	

*(Average age at birth of last child for all cases comes to 28·3.)*

The last child considered in the above table is the one recorded in the schedule up to the time of the enquiry and includes still-births. It is possible that in the cases of certain women included in the table reproductive capacity may not have come to an end.

<sup>4</sup> " Thus in cases of married women, aged 35 and upwards, the families are complete." Census of India, 1921, Travancore Report, p. 64.

But what the above table purports to bring out is the average period which has elapsed between the date of the birth of the last child and the date of the enquiry in the cases of married women of ages 35 and above. This in itself will not give any conclusive proof of the age at which reproduction ceases, but considered in the light of the table of intervals between successive births which follows, it will considerably help to give a fair indication.

TABLE 4—INTERVALS IN YEARS BETWEEN CONSECUTIVE BIRTH.

No. of years.	Number of cases between stated births.							
	1st&2nd	2nd&3rd	3rd&4th	4th&5th	5th & 6th	6th&7th	7th&8th	Total
1	67	45	27	16	15	5	3	178
2	376	263	192	122	66	46	27	1092
3	271	175	111	63	43	22	16	701
4	139	71	45	26	9	7	...	297
5	69	25	12	7	3	...	...	116
6	35	16	9	4	...	...	...	64
7	16	8	5	1	1	...	...	31
8	7	4	...	1	...	...	...	12
9	5	4	2	...	1	...	...	12
10	5	...	...	...	...	...	...	5
Over 10	6	4	1	...	...	...	...	11
Total	996	615	404	240	138	80	46	2,519

It will be seen from the above table that a very large majority (or more than 71 per cent) of the cases record an interval of between two and three years, the general average being 2·8 years.

If we consider the ages in Table 3 in which data have been recorded for ten or more women it is seen that the age at the birth of last child varies from 28·3 to 33·2. These cases relate to ages right up to 45, an age at which it is generally believed that menopause is reached. Thus the shortest period elapsing between

the birth of the last child and the date of the enquiry is 4.1 years and the longest is 17.7 years. Taking the cases of ages 35 to 38 in the table, which account for nearly 53 per cent of the total, it is seen that the interval is 5.5, 4.1, 7.7, 5.8, respectively. These intervals are considerably larger than the average interval (2.8) between two consecutive births to which reference has already been made. This fact suggests that in the cases of women of ages 35 and above either reproductive capacity has come to an end or has considerably slackened.

### **Fertility.**

With a view to ascertaining the total fertility of married women of ages 35 and above, 256 schedules containing the necessary data were separately tabulated. The results show that the average fertility per woman is 4.4. This figure, considered in the light of the previous discussion, would appear to show that the cases considered here were cases of completed marriages.

We have already seen that the age of the woman at the birth of the first child is 18.5; we have seen further that the average interval between consecutive births is 2.8. On the basis of these figures a woman at the age of 35 should have at least six children. But even when we consider married women of ages 35 and above (extending up to 60), the fertility figure we arrive at is only 4.4. It would thus appear that reproductive capacity comes to an end very much earlier than at 35 and probably ceases at the age indicated in Table No. 3.

### **Conclusion.**

The following conclusions appear to follow from the above analysis:

(a) That the age of the woman at the birth of her first child, which is 18.5, is fairly high considering the prevailing system of early marriage in the country, and shows that early marriage does not necessarily mean early maternity (assuming that miscarriages have not preceded the first birth). Medical opinion suggests that



the most suitable age at the birth of the first child is about 20, and it appears, therefore, that the Bombay working classes are very near this ideal.

(b) The interval between two consecutive births is 2.8 years, which, it will be observed, though not sufficiently long, is long enough to avoid an undue strain on the mother. This fairly long interval, it may be noted, is to be found among a class of people who are ignorant of artificial means of birth control.

(c) That the reproductive capacity comes to an end at or about the age of 30—a unique but alarming fact. What the reasons of this early exhaustion may be it would be for the medical profession to enquire into. But perhaps it would not be unreasonable to infer that this has something to do with the lower longevity of our people.

(d) The average fertility per marriage—which for all practical purposes can be regarded as a completed marriage—comes to 4.4. Dr. Whethan, in his 'Family and the Nation' has stated that under English conditions of marriage and mortality at least four children per marriage are necessary to maintain the population.<sup>5</sup> The mortality rate in Bombay City being appreciably higher than in England it is clear that at least so far as the Bombay working classes are concerned, the addition made by them to the population may very likely not be adequate to maintain their numbers. The oft-repeated cry of the necessity of birth control for the working classes, therefore, becomes meaningless at least so far as the Bombay working classes are concerned, unless it is desired that even the existing numbers must be brought down.

<sup>5</sup> Dr. Whethan, *Family and the Nation*, pp. 122-123 "In order that a population should maintain its numbers unaltered, about four children must be born to each marriage that produces children at all. Of these four, on the average of large numbers, two will either die early or have no children, and the other two will be left to continue the race in place of their parents. Such is the result of the Registrar General's returns."

## APPENDIX A

## ENQUIRY INTO INFANT MORTALITY

1. Name and address
2. Age
3. Occupation
4. District of Origin
5. Caste
6. No. of Rooms occupied (Dimensions)
7. Number of Births
8. Number of Still Births

## Particulars of Births

Number.	Place of Birth.	At Hospital or Own Dwelling.	Whether attended by a Trained Nurse or <i>Dai</i>	Place of Registration.	Alive or Dead	If Dead		
						Place of Death	Age at time of Death	Cause of Death
1st								
2nd								
3rd								
4th								
5th								
6th								



# LAND RENT AND PRICES

BY

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In this Journal for October 1930, Mr. Amiya Kumar Das Gupta has an article entitled *Land Rent in Relation to the Pricing Process* in which he discusses in particular an article of mine entitled "The Historical Approach to Rent and Price Theory" published in *Economica*, London, for June 1929. While it is pleasing to find a writer who appreciates the actuality and the importance of the "product-changing" margin, a concept which I developed in my teaching and, so far as I am aware, first explained in publication.<sup>1</sup> I find some things in Mr. Das Gupta's article which seem to call for further treatment. The first of these is relatively unimportant and I will take it up first. Then there will follow another matter of real import and two closely related questions of terminology in which I feel that special usage is desirable, even necessary.

Mr. Das Gupta objects to my statement that Ricardo and Jevons discussed different problems and prefers to call it "rather two aspects of the same problem." I think, however, that there is no real difference between us in this matter. It is true that they discussed different aspects of the one problem of value. Yet the hypotheses were wholly different and it is still my feeling that it is best to recognize the two separate problems. Ricardo supposed that "the land" had no competing use while Jevons supposed a "field" to be in demand for two or more different uses, all of which would pay rent. This is a very far-reaching variation and results in "the land" in Ricardo's problem being

<sup>1</sup> In *The Mita Gakkai*, Tokyo, for March 1921.

forced to accept from "raw produce as a whole" whatever rent it can get while leaving a "field" in Jevons' problem it is free to shift to whatever use offers the best rental. This thus becomes the central difference in the two theories and makes possible their different conclusions. It is because their hypotheses differ that their answers differ. That was the main historical fact brought out by my paper. It is possible that in my zeal to make this point clear I laid rather heavy stress upon this difference; but since this is the key to one of the most stubborn confusions in the history of economic theory and I was bringing it out, I believe, for the first time, I doubt if my statement is too strong. I see no gain, and some danger, lest in calling this one problem instead of two the all-important difference in the hypotheses be lost sight of.

A second point is of more significance. Mr. Das Gupta suggests an interpretation of the difference between Ricardo and Jevons which I do not think is justified by their writings: nor which, even supposing their hypotheses to be as he suggests, would give the results which I have found and he seems to agree to. He says at page 172:

"We find, therefore, that the whole problem of the relation of rent to price turns on the question of the period of time to which we refer. In the short period, owing to the existence of alternative uses of land . . . rent enters into price. In the long period, on the other hand, owing to the inelasticity in the supply of land, rent does not enter into price . . . Thus on the basis of time the two opposite theories of Ricardo and Jevons can be harmonized . . . Ricardo referred to the long-period tendency when he observed that rent does not enter into price; and Jevons referred to the short period when he said that rent enters into price."

It is necessary to inquire first whether there was this difference in the period considered between the theories of Ricardo and Jevons, and second, whether if the difference did exist it would support the difference in the conclusions.

I do not think that Ricardo dealt with long periods and Jevons with short. Unfortunately, neither of them is specific on this point. Mr. Das Gupta offers no proof of the fact and I find no internal evidence that it is true. On the other hand, there is abundant evidence that the Ricardian theory was forged in the discussion of an immediate, practical problem, just as real and immediate as is the discussion of "safeguards" in India. Cannan says that "we are indebted . . . to the corn-law controversy of 1813—15 for the Ricardian theory of rent." The pamphlets in which West, Malthus and Ricardo gave that doctrine to the world were all published separately but within some six weeks. Parliament was discussing the corn-law question and the two former writers hurried their publications in an effort to influence that body. Ricardo, too, was much given to the discussion of current problems and had made his reputation only a few years earlier by writing some articles to the newspaper, *Morning Chronicle*, on the bullion question. Far from being an abstract, long-run doctrine, the Ricardian rent theory can be understood only in connection with the controversy then raging between the English "landed interest" and the "monied interest." There had long been a widespread opinion that land rent was a "monopoly payment." This was upheld by the most respectable economists, including Adam Smith. On the other hand, the commercial and industrial classes were convinced that this "monopoly payment" was making the price of "raw produce" high in the cities. This made food dear, which in turn made wages and the cost of production of manufactured goods high. This in turn compromised the positions of the industrial, commercial, financial and transport groups in the community. Malthus wrote his pamphlet on the "Nature and Progress of Rent" in an effort to soften this feeling against the landlords. He found that most writers, of whom David Buchanan was then an important one,<sup>2</sup> "consider rent as too nearly resembling in its nature

<sup>2</sup> In his edition of *The Wealth of Nations*, 1814.

and the laws by which it is governed, the excess of price above the cost of production, which is the characteristic of a monopoly."<sup>3</sup> This is just what the opponents of the landlords were saying and they fully believed that rent was a mere monopolist's gain added to the legitimate costs of production.

I see no reason to change the conclusion which Cannan reached many years ago,<sup>4</sup> and which all my own studies have only verified, that the Ricardian theories were not long-run and abstract but for the solution of immediate, practical, and often really short-run problems. Ricardo dealt with concrete problems though his method of treatment was often abstract. It does not appear that this difference between Jevons and Ricardo can be established.

But Mr. Das Gupta goes further and says that this is a basis upon which one may justify the difference in their conclusions about the relation of rent to prices. Ricardo found no relation of rent to price because he dealt with the long period when "no profitable transference from one use to another is possible." Mr. Das Gupta seems to accept my claim that the supplies of the several commodities are kept at their normal amounts by the fact that their separate prices allow them to pay, besides the necessary amounts to the other factors of production, the competitive rents on those pieces of land "on the margin" of leaving any commodity for another. These units of the separate commodities are barely brought out by the price and "would not be produced at all," unless they paid those competitive rentals. But he seems to take this as limited to short periods only.

I find this position untenable. The long period, no less than the short, implies that factors of production (pieces of land as well as other factors) are adjusted among their different uses so that earnings are as nearly as possible (a) maximized, and (b) equalized for equivalent factors in different uses. The equaliza-

<sup>3</sup> The Nature and Progress of Rent, Hollander's Ed., p. 12.

<sup>4</sup> In Theories of Production and Distribution, pp. 383-388.

tion of earnings of different factors in different uses means that the long-time earnings in cotton mills must be such as will hold men from going over to silk mills; and that long-time rents in cotton growing must be such as to hold land from going over to rice. Many pieces of land are always "on the margin" of changing, and this is as true of the long as of the short period. The forces of gravitation hold the universe in equilibrium over a moment or a thousand years: and the slightest change would be as effective over the longer period as over the shorter.

While I would not make much of the difference it might well be contended that it is just for the longer periods that this ability of land to change its use is most effective. The longer the period the less the difference necessary to secure the change. Land may grow cotton for a century while it is just nearly induced to go over to rice. Over the long period, the balance is more delicate, hence all the more is the cotton actually produced "on the margin of not being produced at all." The theory of the product-changing margin does not depend upon the fact that changes are *actually made* and land shifted to another use but on the fact that the land *would* shift if the commodity produced ceased to pay the best possible rent. Whether the period be short or long there is much land, like much labor and capital, just barely held in its occupation by the regard it receives. The payment of particular rentals is an essential part of the tendency towards economic equilibrium and it is just as effective for a long as for a short period.

Finally, Mr. Das Gupta has used certain terminology in this discussion which it seems to me should be avoided. He uses the old phrasology, "enters into price" as if the pay to the factor of production somehow fixed the price. It has been pretty clear since Marshall published his *Principles* that "the amount of the thing and its price, the amounts of the several factors or agents of production used in making it and their prices, . . . all these elements mutually govern one another." Thus if wages enter into



price, making it high or low, it can with equal truth be stated that price also enters into wages, making them high or low. So with rent. If the price of the product of a piece of land becomes high the rent rises in relation to it. The only way out of this difficulty seems to be that proposed by Marshall, namely, to "go to the margin" where goods are "on the margin of not being produced at all" and see by what process equilibrium is being formed. For our problem it means to go to the places where particular products are in that position and see whether or not land is among those factors which shift from use to use in search of the best returns, thus helping to regulate the amounts of different commodities which will be produced. If we find land passive, accepting whatever is offered it, then rent does not affect supplies and prices. I hope that I have made it clear, in the article under discussion, that for produce in general the land is passive, as Ricardo claimed, but for particular kinds of produce land shifts on the product-changing margin just as any other agents do, and that this affects supplies and prices of the particular products. Instead of inquiring whether a given payment "enters into price" I should like to see Marshall's test accepted. Is the agent which receives the payment an active or a passive agent at the margin of production?

In another connection this usage is found. "In the long period, . . . a remission of rent does not cause any fall in the price of corn nor does a tax on rent cause any rise in the price of corn: for the adjustment is such that a remission of rent or a tax on rent does not create any scope for a profitable transference of land from one use to another. . . ."

This term "corn" is the one used by Ricardo to represent raw produce as a whole. It was then common to use it in the generic sense for all food grains rather than for maize as we now use it in America. But it is just because Ricardo used it in this all-inclusive sense that land for him had no alternative use and was therefore forced to accept whatever rent was offered or return

to nature and receive nothing. It is this that makes his theory different from Jevons' and on this account that his theory is correct. But it appears that Mr. Das Gupta cannot be using the term in the Ricardian sense because he is speaking of the "transference of land from one use to another." In this Ricardian sense there is no possibility of transferring the land to another (profitable) use. On the other hand, surely, the term is not being used in the narrow sense of *maize*. If so this is untrue; because the remission of all rents on maize fields will cause many fields to be planted in that crop: and the taxing of all rents received for growing maize would cause only a few rent-paying fields which had no alternative use to be planted to that crop. It seems that this term has been given a definite connotation by Ricardo's discussion and that in economic discussions that meaning should be preserved. Unless very carefully qualified such usage leads only to a further confusion.



## NOTES

### WAR OF MONETARY STANDARDS AGAIN

The state of the world's exchanges and of the markets for the precious metals would lead one to feel as if the old controversies relating to the monetary standards were going to be revived. The world's monetary gold supply is said to be short and silver is a drug in the market. This is, according to some, a strong case for the adoption by the leading nations of the world, of the "double standard." The prevailing depression is being attributed, among other things, to the decreased purchasing power of the people of the East whose hoards of silver have lost most of their value, and it is believed that the industries and the trade of the manufacturing countries of the West will undoubtedly revive if something effective could be done to restore the price of the white metal. Demand for silver on a larger scale, will raise its price and that demand can be stimulated if silver were once more to be used for monetary purposes. It has been authoritatively calculated that the monetary supplies of gold in the near future are going to be inadequate for the normal needs of economic development; and suitable distribution and proper conservation of that metal have been suggested as remedies against the prevailing slump in prices, which is attributed to the shortage of credit and money, that is of gold, their basis. Why not supplement gold, which cannot be had in the required quantities, with silver, whose supply is ample, and adopt bimetallism as the monetary standard of the leading nations of the world? This is a simple remedy which will cure all our present economic and future currency troubles at a stroke? An international conference to discuss this question has been suggested, and it was thought Mr. Snowden would jump at the proposal, harassed as he is with monetary difficulties. It appears, however, that he has not much faith in that

specific and would only participate in discussions if such a conference were at all called.

**Sufficient unto the day is the evil thereof.**

Financiers and economists perhaps think that though the difficulties created by the maldistribution of gold are serious, they can be negotiated with closer international co-operation and understanding; and they would not like the world to fly from the frying pan of gold into the fire of a silver muddle. The history of bimetallism is indeed not very encouraging to the idea of its reestablishment and people are so much wedded to a gold standard that they cannot think of having anything else. It is, however, the uncertainty into which the monetary systems of the world are likely to be thrown by even a serious talk of introducing the double standard that will keep away financiers from it. It is believed that the gold standard, as such, has not failed. It is bad management that is responsible for the present monetary plight. Then again, the U.S.A., France, and until recently Great Britain, had no cause to fear a shortage of gold, and as they dominated world economy, they had no doubt that the gold problem would be ultimately solved. In the course of the past few years, after the post-war inflation, nations had succeeded in restoring the gold standard and in putting their monetary houses in order. The exchange crisis in Great Britain, in any event, was unexpected, though that country lived on a narrow gold margin. It appears to have descended upon Britain overnight and the situation became suddenly so serious that it caused the downfall of the Labour Cabinet. The steady outflow of gold from London weakened sterling and rendered the position of the Bank of England precarious. Credits from Paris and New York became necessary to prop up the pound sterling, and drastic retrenchment and economy in Government expenditure became inevitable as a security for foreign financial assistance. This is regarded by Labour leaders as an abject surrender to bankers, for which there was no justification. It is even represented as

**A capitalist conspiracy**

against the just claims of labour to a decent standard of living. Having failed to get wages cut and to avoid the communal control of industry, capitalist interests have adopted this indirect method to reduce beneficent social expenditure, and the bogey of an exchange crisis was set up. Whatever truth there may be in this socialist allegation, it is a fact that the Labour Cabinet took a grave view of the financial position and prospects and had to seek foreign assistance to save the pound sterling. It is worth asking whether this remedy is likely to give more than temporary relief? Then, again, what about the rupee? The Government of India find themselves in no better situation than His Majesty's Government. We have a huge prospective deficit, and the rupee-gold exchange cannot be maintained at the statutory ratio. The bank-rate has been high and Government has been borrowing with both hands to meet the daily needs. Will the Government of India follow the British Government's example in all important particulars? Two authoritative pronouncements have recently been made in this connection. The financial embarrassments of Government, the continued loss of gold from the currency reserve, the sale of reverse councils week after week and the forthcoming liquidation of sterling commitments in London, to say nothing of the disastrous fall in internal prices, largely attributed to a high exchange ratio, fanned the 16d. *versus* 18d. rupee controversy into flame. The uncertainty prevailing in the money market was rendered more uncertain by this talk about a revision of the ratio, and His Excellency the Viceroy felt called upon to confirm, in his address to the Legislature what the Finance Member had been saying all along, with regard to Government's determination to maintain the statutory ratio. The representative of Government in the Council of State reiterated the statement about their exchange policy and declared that they had ample resources to carry out their determination.

**British Help and the Ratio.**

The Prime Minister hinted long ago that His Majesty's Government would not hesitate to run to the rescue of India's credit if and when such assistance was found necessary, and the meaning of this cryptic statement has now become quite clear. Parliament would be advised to grant a big loan to India to enable the Government here to put the Secretary of State in funds and thus to bolster up a tottering exchange. The second part of the Premier's declaration was also referred to in the Council of State, viz., that there could be no talk of manipulating the rupee-gold ratio while the discussions of the Round Table Conference proceeded and the issue of constitutional advance hung in the balance. The statutory obligation of Government to maintain the 18d. ratio and the responsibility of His Majesty's Government to assist the Government out here may be all right. But what about the depletion of India's gold reserves and the virtual indefinite postponement of the question of Indian currency being placed on a true gold standard? Why should India fritter away its gold when other nations are conserving and sitting tight upon such supplies of gold as they possess? People are thinking whether the experience of the years 1920-21 is going to be repeated? And they are asking, will Government abandon the effort to prop an impossible exchange ratio when it is too late? These doubts ought to be promptly cleared from the public mind. The Premier has recently stated further that Government's Indian currency policy is a settled policy and has never been under consideration in the discussion of His Majesty's Government with foreign bankers in their late financial negotiations.

V.G.K.

**FINANCE AND CURRENCY**

The suspension of the Gold Standard in England on the 21st September, followed by two successive Currency Ordinances issued by the Government of India during the same week, and the prospects of heavy deficit in the Central Budget revealed by the

Finance Member on 29th September along with his proposals for new taxation—these things have raised momentous issues affecting the economic life of the country. New taxation of about Rs. 5 crores was imposed in the budget of 1930-31; at the end of the year, however, there was a deficit of Rs. 13.56 crores. For the current year new taxation of about Rs. 15 crores was imposed in March last and it was expected that this would balance the budget. Within six months it has been realised that the Government will have to face a deficit of Rs. 19½ crores during the current year and of an equal amount in 1932-33. The proposals of the Finance Member to meet this gap of Rs. 39 crores involve additional taxation, cuts in pay and retrenchment. He hopes to improve the situation by about Rs. 34 crores in the next eighteen months. It is difficult with the data so far available to make an exact estimate, but we may say that approximately one-third of this amount will be found by retrenchment and cuts in pay, and two-thirds by new taxation. This means that since March 1930 we have had additional taxation of about Rs. 42 crores.

Most of the additional taxes is under Customs or Income-tax. In view of the fact that the higher rates of these two classes of taxes imposed in March 1930 and again in March 1931 have not brought the expected revenue, and in view of the fact that the general depression continues, it is difficult to see how the Finance Member can expect to realise the large additional amounts of revenue that he hopes to get from these sources. If we add to these the instability in trade and industry created by the recent changes in the currency system, we shall realise the gravity of the situation. It is not possible to go into the details of the various proposals for additional taxation. It will be sufficient if we point out those few which may be considered objectionable. The import duty on raw cotton will make it difficult for the Indian mills to manufacture goods of higher counts to which they have taken so successfully in recent times. For a country like India which has still so much to do by way of industrial development, an



import duty on machinery must be considered a great obstacle. The addition to the excise duty on salt may, in other spheres, do more harm than good to the Government. The proposal to tax incomes between Rs. 1,000 and Rs. 1,999 must involve to the lower middle classes a higher percentage of tax burden in the aggregate, in view of large additions to the Customs duties to which also this class will contribute substantially in an indirect manner. The increase in postage rates will also affect the poorer classes more adversely.

Since the War so many additions have been made from time to time to suit the exigencies of the budget both to the Customs duties and to rates of taxes on Income, that the time has arrived for an early revision of the Tariff schedule on the one hand and the Income-tax rates on the other. There are principles of policy affecting trade, industry and the economic life of the country in general, which must be examined thoroughly in connection with these taxes. Unless a definite policy is thus worked out, we shall get haphazard changes from time to time involving an uneven incidence of taxation on the people.

The recent changes in the currency system of the country prove that in spite of costly enquiries in recent times, there is no fundamental change for the better in this most important respect. By linking the rupee to the sterling it is reduced to the position of a shilling. For purposes of accounts, the relation of the shilling to a pound sterling is certainly stable, but the shilling fluctuates in its real value in terms of commodities so long as the pound sterling fluctuates in its relation with gold. Similarly, the rupee, which is now only a fraction or  $\frac{3}{40}$  of a sterling, is in exactly the same position. If this is appreciated, the comparative stability of which the Finance Member spoke in the Assembly, will amount to a theoretical stability merely for the purposes of accounts and that too with England alone.

It is unfortunate that on such occasions Indian public opinion is not properly organised. On problems of this nature, a sound

knowledge of the principles of monetary science and of the practice in other countries on the one hand, and a proper grasp of the currency mechanism in this country on the other, are required before men in business and public life can speak with authority. This presupposes a co-operation on a footing of equality between economists and men in business and public life to work out a common policy in the best interests of the country. Unless ways and means are found to have such co-operation in normal times, it would be difficult to bring together people in different walks of life in times of crisis ready to appreciate one another's point of view, and come to an agreed solution. It is only to be expected that such co-operation will be established in the near future.

—C. N. V.

### TRADE OF INDIA

The Review of the Trade of India in 1930-31 presents a lucid picture of the trade conditions and trade of India in the year with which it deals. The year was characterised by a disastrous fall in the prices of the staple products of the country and a political movement an important item of which was addressed at a boycott of British goods in general and foreign cloth in particular. Prices fell the world over but they came down more sharply in India than in other countries. The fall of prices was 22 per cent in the United Kingdom, 24 per cent in the United States, 23 per cent in Canada, 24½ per cent in Australia and 27 per cent in Japan. But it was 32 per cent in India.

The greater fall of prices in India was due to the fact that the prices of primary products—raw materials and foodstuffs—fell much more than the prices of manufactured goods; and India being mainly a producer of the former experienced naturally a more serious fall than countries that are principally industrial.

That the fall was higher in the case of raw materials than in the case of finished goods is borne out by the percentages of falls recorded alike by the Indian index number series and the Calcutta index number series of exported and imported articles during September 1929 and March 1931. According to the Indian index numbers the fall in the case of exported articles was 39 per cent and in the case of imported articles only 14 per cent. And according to the Calcutta index numbers the fall in the same two categories of articles was 37 per cent and 16 per cent respectively. All this shows "that the fall in the case of exported articles was over a third in March 1931 as compared with September 1929 and the amount of fall was two and a half times the fall in imported articles, the latter being less than one-sixth."

The higher fall in the case of agricultural raw materials is more clearly shown by the percentages of falls arrived at from the Calcutta index numbers for the different groups of articles in September 1929 and March 1931. According to these the percentages of falls worked out—for raw jute 50, for oil seeds 49, for wheat 47, for raw cotton 36, for rice 35, and for jute manufactures 34. Which is to say that the prices of the first three articles had fallen by nearly half and those of the last three by nearly 35 per cent in the course of 18 months. On the other hand, the percentages of falls for imported manufactured articles were—for cotton manufactures and sugar 19 each, and for metals 15—that is, in none of these cases was the fall greater than about 25 per cent.

All this is to say that "the prices of India's exports fell considerably more than the prices of her imports." And this difference had a very serious effect on the foreign trade of India. The trade of India in 1930-31 declined heavily as compared with her trade in the previous year. The value of the imports of private merchandise fell from Rs. 2,40,80 lakhs to Rs. 1,64,82

lakhs, that is, by Rs. 75,98 lakhs or 32 per cent and the value of the exports came down from Rs. 3,10,81 lakhs to Rs. 2,20,49 lakhs that is, by Rs. 90,32 lakhs or 29 per cent. Taking treasure into account the imports declined by Rs. 76,87 lakhs and the exports by Rs. 89,49 lakhs. The visible balance of trade in favour of India was only Rs. 31,33 lakhs in 1930-31 as against Rs. 48,89 lakhs in 1929-30.

The decline in the value of exports is explained solely by the awful fall in the prices of agricultural raw materials. For the decline in the value of imports two reasons are held responsible, namely (1) the reduced purchasing power of the Indian ryot, and (2) the boycott movement. The purchasing power of the people was depleted to the extent the annual value of the exports which go to pay for the imports fell. The fall in the case of jute (raw and manufactured), raw cotton and oilseeds was about Rs. 62 crores and the total fall in the value of exports was over Rs. 90 crores. "With this smaller value for his exports the producer, mainly the agriculturist, could not afford to buy imports on the normal scale and to this extent imports must perforce be reduced." A further reason for the reduced purchasing power is to be found in the fact that although owing to the serious fall in the value of his wares, the agriculturist's income was lowered to half or less than half in some cases, his payments for rents, etc., remained the same. Thus he was left with a very small balance for any expenditure beyond his barest necessities.

The boycott movement is not credited with having much to do with the decline in imports, but it is regarded as having affected adversely particularly the imports of cotton-piecegoods and tobacco. Moreover, it was levelled at the United Kingdom and here it did certainly achieve some tangible results. The imports from that country fell by 5-6 per cent, which fall is "definitely abnormal and must to some extent be attributed to the boycott."

Some of the important declines in value under imports were—the textile group Rs. 37 crores—out of which cotton-piecegoods were responsible for Rs. 30 crores and cotton twist and yarn for Rs. 3 crores; metals and metal manufactures Rs.  $7\frac{1}{2}$  crores; sugar Rs. 5 crores; machinery and millwork Rs. 4 crores; motor vehicles Rs. 3 crores; and hardware Rs.  $1\frac{1}{2}$  crores.

The principal declines under exports were—jute and jute manufactures, Rs. 34 crores, raw jute being responsible for Rs. 14 crores and jute manufactures for Rs. 20 crores; cotton and cotton manufactures Rs. 21 crores, raw cotton having to its credit Rs. 19 crores and cotton manufactures Rs. 2 crores; food grains Rs. 5 crores; oil-seeds Rs. 8 crores; hides and skins Rs. 3 crores; and tea Rs. 2 crores.

The gap left by the great reduction in the imports of cotton piecegoods was filled firstly, by increased production from Indian mills which went up from 2,419 million yards in 1929-30 to 2,561 million yards in 1930-31—an increase of 142 million yards; secondly, by the large stocks of woven goods held by the Indian mills which at the beginning of the year stood at 483 million yards; and thirdly by increased production of handspun and handwoven cloth which the political movement must have led to.

The net imports of piecegoods declined from 190 crores of yards in 1929-30 to 87 crores of yards in 1930-31, i.e., by 103 crores of yards. The net available mill production went up from 229 crores of yards to 246 crores of yards or by 37 crores of yards. The total yardage available for consumption was thus 333 crores in 1930-31 as against 419 crores in 1929-30, that is it was less by 86 crores. This amount came wholly from imported piecegoods and not from Indian production which increased by 14 crores of

yards. The imports from the United Kingdom fell by 72½ crores or 58 per cent and from Japan 24 crores or 43 per cent.

During the year the United Kingdom lost 5.6 per cent of the import trade and Japan 1.0 per cent. Germany gained .9 per cent, Java .6 per cent, China .3 per cent, Australia .2 per cent, Kenya and Zanzibar, .4 per cent, and the United States of America 1.8 per cent.

Of the exports, the United Kingdom gained 2.2 per cent, China 1.8 per cent, Japan .4 per cent, Ceylon 1.8 per cent and the Straits Settlements .3 per cent. On the other hand, Germany lost 2.1 per cent, the United States of America 2.2 per cent, and France .4 per cent.

The decline in the trade of India that was witnessed in the year 1930-31 has been continuing to the present day. This can be easily seen from the table given below:—

MERCHANDISE—*Rs. lakhs.*

	April			
			Increase + decrease—in 1931 as compared with 1930	
	1930	1931	Rs. lakhs	Per cent
Exports	24,58	14,08	– 10,50	– 42.7
Imports	18,06	12,56	– 5,50	– 30.5
	May			
	1930	1931	Rs. lakhs	Per cent
	1930	1931	Rs. lakhs	Per cent
Exports	21,84	13,50	– 8,34	– 38.2
Imports	17,90	11,40	– 6,50	– 36.3
	June			
	1930	1931	Rs. lakhs	Per cent
	1930	1931	Rs. lakhs	Per cent
Exports	20,71	12,58	– 8,13	– 39.3
Imports	13,86	12,13	– 1,73	– 12.5

## NOTES

## July

Exports	20,96	12,54	- 8,42	- 40.2
Imports	13,67	10,72	- 2,95	- 21.6

## August

Exports	17,61	13,32	- 4,32	- 24.5
Imports	12,71	9,66	- 3,08	- 24.2

## Five Months

Exports	1,05,73	66,02	- 39,71	- 37.6
Imports	76,23	56,48	- 19,75	- 25.9

—G. D. K.

## REVIEWS OF BOOKS

ECONOMIC ASPECTS OF SOVEREIGNTY, by R. G. Hawtrey, pp. 192.  
Longmans. 9 sh.

This book is composed of a course of lectures delivered by the author at Boston. It deals with the economic problems raised by the absolute sovereignty of the modern state. In Economic science, we are accustomed to consider welfare as the aim of economic activities, but the modern state is more concerned with national power than welfare, and whatever be the ostensible cause of difference between nations, the real cause is the conflict of economic interests. Power is what all modern nations desire, but power is to be had only by economic success. This produces rivalry, which brings about wars. Such is the theme of this work.

In the first chapter, the author discusses the connection of sovereignty with property. "Sovereignty is not property but it carries with it important economic rights which are closely related to the rights of property" (p. 26). These rights may be real or illusory, but it is highly illusory when a State counts upon profiting by a war undertaken for the protection of its colonies. Here he affirms the conclusions of Norman Angell in his well known work, **The Great Illusion**. Indeed private individuals may gain in the form of concessions, but this may not be eventually for the good of the body-politic.

In the next chapter, Mr. Hawtrey discusses the problems raised by a country taking part in the economic development of another. In the course of that discussion, he lucidly analyses the reactions of the export of capital from one country to another. "The capital-exporting country curtails its consumption of foreign trade products and assigns the power of consumption which it thus gives up to people in the capital-importing country, who in return assist in producing the new capital, which becomes the property of the investors in the former. The fund of foreign trade products in the world is drawn upon to provide subsistence and remuneration for these producers of capital. Productive power in the capital-importing country, which would otherwise be providing for the consumption of the inhabitants, is set free to construct new capital in so far as consumption is provided for by imported goods" (p. 36). He also shows how the industrial revolution paved the way for such transactions between countries in different stages of economic development and how this brought about a complex kind of economic imperialism.



In the next three chapters, the author discusses the interactions of communications and population, the results of protective tariffs and of restricting immigration, the economic causes of war, and the mobility of wealth. "Marketing centres, manufacturing centres, financial centres, together with all that they imply in transport and communications, are what we mean by the mobility of wealth" (p. 89). The author develops the implications of what Mr. Lowes Dickinson calls the 'International Anarchy.' There are also important historical accounts about the economic rivalry of nations between 1871 and 1914. In a concluding chapter, the means of avoiding conflict are discussed, but no specific remedy is suggested with approval. "In the international anarchy, there is no provision for growth or adaptation except through the use of threat of force" (p. 136). The limitation of armaments and arbitration are discussed as alternatives to war. An international authority with unchallenged power would be desirable, but the author has hardly any suggestion to make concerning its constitution or powers. He however concludes by making some helpful general remarks about the over-riding of sovereign rights with a view to bringing about greater harmony between the interests and aspirations of competing nations.

Mr. Hawtrey is a stimulating thinker on matters connected with currency and finance, but in the book before us he appears more like a layman than as an expert. Indeed his thought is stimulating and he has many valuable suggestions to make, but it cannot be said that he has cut new ground. However, we may remember that the subject is on the borderlands between Economics and Politics, and in these days of rapid specialization it is encouraging to find that even specialists like Hawtrey are prepared to acknowledge the value of exploring borderlands to throw fresh light upon important social problems. There is an essential unity in social phenomena, and to deal with parts of them in water-tight compartments is to stultify analysis in some of our most important economic problems.

ECONOMIC DICTIONARY, Part Second (German-English), by Dr. Hereward T. Price, Berlin; Verlag von Julius Springer. pp. 676.

Students of Economics are aware how the terms used in their science are often the ordinary words commonly employed in every-day life, and how, therefore, their special economic significance has to be clearly brought out in the course of exposition. This difficulty is particularly great when we have to deal with a foreign language, and a dictionary of economic terms becomes indispensable. The German-English dictionary which Dr. Price has compiled with extensive labour and care eminently fulfils

the object with which it was undertaken, viz., "to supply the English-speaking reader with a dictionary that would enable him to understand German works on Political Economy." He has also succeeded in attaining his other aim, which is "to meet the needs of the banker, politician, lawyer and other professional men, in short, to combine the scientific with the useful." To compile a good German economic dictionary, it is not enough to pick out economic terms from the market place and ordinary general dictionaries. It is necessary, further, to dive into the vast and ever-growing volume of literature on the various topics relating to Economics and to bring out the meanings of German terms through appropriate English equivalents. Dr. Price's work is exhaustive, penetrating, scientific and practical. It is calculated to be of immense use to those who have to handle German works on Economics. One may open any page of the dictionary and its peculiar merits will be abundantly illustrated by the information of a varied kind supplied there.

—V. G. K.

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THE AUSTRALIAN TARIFF, An Economic Enquiry, Economic Series No. 6. Melbourne University Press, in association with Macmillan & Co. Price cloth 3s. 6d.; paper 2s. 6d. Pp. 232.

This book is the report of an informal committee appointed by Mr. Bruce, Prime Minister of Australia, in 1927, to enquire into the economic effects of the Australian Tariff. Fiscal protection is supposed, as a rule, to help the rapid economic development of the country adopting it, in spite of the temporary sacrifices it is called upon to make in the shape of heavier taxation and higher prices which the public has to pay. Opponents of protection claim that the benefits of tariff protection are illusory and that, such as they are, they are counter-balanced by the evils inherent in that policy. It is, therefore, necessary that the effects of tariff protection should be examined from time to time to ascertain whether the promise of economic benefit held out on its behalf, is realized. Mr. Bruce, who has contributed a brief Foreword to the report under review, is very clear about this point and says: "The Australian policy of protection is based upon the belief that such a policy tends to accelerate our development and to increase our national prosperity. This policy the people of Australia have endorsed on many occasions, and it has become an integral part of the structure of our economic life . . . . . It is not enough for us to affirm confidently that protection is the only policy for Australia; we should be intelligently and fully informed as to every aspect of its operation; we should be able to assess its benefits and cost, not in general terms but with all possible exactitude." These observations are extremely refreshing coming as they do from a responsible person occupying the position of the Premier of Australia, specially in view

of the fact that Protection has an invariable tendency to become a political creed and to create vested interests which dislike impartial criticism.

The committee of enquiry was composed of economic experts and businessmen and they have executed their difficult task purely as a labour of love. Protection usually becomes a political faith and a badge of patriotism and few have either the candour or the courage to estimate its cost to the public and the national sacrifice it may involve. The Committee has explored this problem in a scientific and a practical spirit, and its conclusions and suggestions are calculated to render solid assistance to the government and the people of Australia. Space will not permit even a brief summary of its discussions and conclusions in this place, and its educative value can be realised only on a careful study of the work. All we can say here is that in India where "discriminating protection" has been adopted as a national policy, the scientific spirit which characterises the report of the committee and the methods of investigation it has followed, are bound to supply sufficient stimulus and guidance in similar enquiries so essential for the pursuit of a correct fiscal policy.

—V. G. K.

THE ECONOMICS OF AUSTRALIAN COAL, Economic Series No. 7, by F. R. E. Mauldon B.A., M.Ec., Melbourne University Press. Price 10s. 6d., pp. 280.

Like the industries connected with the production of rubber, coffee, sugar, cotton and wheat, the coal industry has been passing through a crisis all the world over. Owing to the utter disorganization into which world trade has been thrown, each nation has been compelled to take stock of the position of its main industries and to seek to adopt such measures of adjustment and reorganization as appear to be necessary and practical. These efforts at industrial rehabilitation, presuppose thorough enquiries into the condition and the prospects of different industries and Mr. Mauldon's work represents an attempt of this kind with reference to the coal industry of Australia. An economic survey of an industry to be really helpful, must be full, impartial and suggestive. Mr. Mauldon's investigation satisfies these tests in an abundant measure. The opinion expressed by Prof. Copland in his introduction to the book, is a just testimony to the merits of the work: "The book will please neither owners nor miners, but that may be regarded as a compliment to the author. He brings to the task an intimate knowledge of the industry, an impartial judgment and the courage of convictions reached only after long and dispassionate enquiry. Some of his conclusions may well be as distasteful to him as to the most extravagant partisan."

The book is divided into three parts. The first deals with the foundations and structure of the Australian coal industry, the second, with the various problems which have arisen in connection with its successful working, such as costs, profits and prices and also wages and labour disputes; and the third with immediate and future improvements. Copious statistics are given throughout the book. How comprehensive Mr. Mauldon's enquiry is, may be seen from the fact that no aspect of the organization of the industry is neglected and even the economics of mining technique receives due attention at his hands. The remedies for the parlous state of the coal industry cannot but be drastic, and Mr. Mauldon leaves no doubt in his readers' minds with respect to this matter. He, therefore, tells his countrymen that real improvement implies "capacity as much for the surrender of out-worn prejudices of mind and feeling as it may for the temporary surrender of economic advantages." He goes on to say: "Such higher purposive motives may be developed in every man. But, only in the measure that they are consciously disentangled from the self-regarding motives and allowed to assume supremacy, will their operation minister to the reordering of industry."

—V. G. K.

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THE INDIAN CURRENCY SYSTEM (1835—1926), by Sir J. C. Coyagee. Pp. 326+xviii. Rs. 5. Published by the University of Madras as one of its series of Economic Studies.

This volume contains the Sir William Meyer Lectures for the year 1929. It is a timely and readable contribution to the study of questions that are living issues in India—"the task of monetary reconstruction on comprehensive lines and the adoption of an improved standard." It "differs from the other works on the Indian monetary system in confining itself to a consideration of the leading tendencies in the development of that system." Apology is made by the author for the large space devoted to the consideration of currency proposals made in the latter half of the nineteenth century, "stepping stones of monetary reform. For instance, one can scarcely understand how strongly events were leading up to the adoption of the Gold Exchange Standard in India unless one is familiar with the proposals of the Government of India in 1878, with the currency scheme put forward by General Strachey in 1886 and with Sir D. Barbour's famous minute of 1892." There can be no doubt that we have here a distinctive and valuable contribution to the elucidation of matters that are of direct importance to everyone in India.

Yet, valuable as the contribution, the impression is given that an opportunity has been missed of presenting a much more incisive study of these problems. One must assume, from their general scope, that the lectures are directed rather towards the student than the expert. As a

matter of fact the general reader would have little difficulty in appreciating most of what is expounded here. One often hears, however, the lament, "I cannot understand this currency problem." May it be that much of the difficulty is caused by a lack of system in the expositions of what is certainly a complex phenomenon? In these lectures there is reiteration and allusiveness which with advantage could have been replaced by a straightforward exposition of the more basic facts, and a clear statement of the ideals aimed at, which would have directed thinking along more definite lines and made the volume self-sufficient for the general reader. Yet the fact that so much deference is shown to "authorities" suggests that it may be questioned if a straightforward exposition is possible. But it cannot be contended that all that is possible has been done to put the matter in correct perspective. It is annoying, and rightly genders suspicion, when for example we have no more indication as to the identity of the "authority" than is contained in phrases like "one writer of distinction" (167), "a leading economic journal" (199): they suggest that there is nothing more to be said—we must simply acquiesce!

A very definite protest must be made against careless proof-reading in a publication issued by a University, especially in these days when the supply of graduates who might undertake such work is grievously more than ample. One may instance "the God Exchange Standard" on page 170; but generally the slips are depressing—the result of sheer slackness. Where can there be pride in printing if 3.5 is allowed to appear (on page 320) as  $3\frac{1}{2}$ ? The index is spaciouly printed, but very inadequate: if it were thorough, the extent of the repetition would become clear. A really analytical table of contents would have greatly facilitated the use of the book. But after all it may be unfitting to ask for precision: the Currency Committee of 1919 is quoted (191) as having said that "the gross circulation of notes had increased nearly three-fold, while the percentage of metallic backing has (sic) decreased by nearly one-half," which, if language were used carefully, would probably mean that metallic backing was practically constant. With such a use of language can diagnosis be anything but halting or over-confident? The confusion pointed out (218) in the use of "standard ratio" illustrates this.

Economics at its highest is capable of something better than reasoning from vague quantitative statements which have to be accepted along with the alleged deductions, though even precise statistics are notoriously liable to varied interpretation. On only one occasion in this volume (307) is a fair opportunity given to the reader of convincing himself of the soundness of the exposition. In a study so complex one of the fundamental desiderata is to avoid over-simplification and to present things whole. Without some kind of summary of the *facts* as to price and wage levels,

flow of specie, borrowings, exports and imports, production of gold and silver, and whatever else may be thought relevant—a summary to which constant reference is possible to check the statements made, the exposition is bound to be deadening to the critical faculties. Again the historical narrative would be lightened and enlightened were there date-lists in which are noted the times of promulgation of ideas—notes, despatches, conferences, etc.,—and of the initiation of action—proclamations, acts, and so forth. And then, what may seem a detail, “G.E.S.” for “Gold Exchange Standard” stands mournfully alone as a contraction—“every science that has *thriven* has thriven on its own symbols.”

As a stimulus to the student, however, this volume of lectures may be very useful. Attention is at least directed towards studies that are worth making. Great stress is laid on the illuminating character of the evidence given before the Fowler Committee, but the suggestion of a relation of cause and effect (121) between Prof. MacLeod’s evidence and the recommendations of the Committee does not carry conviction. The description (291) of how the same arguments, whether fallacious or not, are used repeatedly should stimulate the search for genuine principles.

—J. M.

PENINSULAR EUROPE: SOME GEOGRAPHICAL PEREGRINATIONS ANCIENT AND MODERN, by L. W. Lyde, M.A. (Longmans), pp. 310. Price 10s. 6d.

“For more than a quarter of a century Professor Lyde has been a source of inspiration to successive generations of students. In the early days of the development of modern geography he played an almost lone hand in University circles, but he has lived to see Departments of Geography firmly established in every University in this country, and his own students carrying on his work and traditions in the farthest corners of the globe.”

These opening words of the “Editorial Foreword” from the pen of Dr. L. Dudley Stamp, himself our outstanding representative of the generation formed by the Master, are the fittest introduction of the book under review. The readers will know they have before them a matured specimen of that ‘philosophy of geography,’ of which the author has been the ardent pioneer. “At long last a little of that philosophy has been put on paper and forms the substance of this book.” We do not expect that the reader will agree with all the conclusions arrived at by the author, but even where he does not he will find in them ample food for stimulating thought.

The very central idea of the book, “Peninsular” Europe is arrestingly summed in the opening sentence: ‘Peninsularity is the differentiating

feature of Europe,' and this is illustrated from the early developments of the peninsulas, as distinct from the broad 'incoherent spaces of the East and North.' "It was to the West and the South of the Rhine-Danube frontier of the Roman Empire that the idea of a Nation-State sprang up in the natural units of the articulated peninsulas." The five great peninsulas of Europe present, every one of them, a strong unity, chiefly when compared with the medley of races in central regions like Germany. "The five great peninsulas are relatively isolated, and have considerable variety of relief. Indeed their advantages in the way of varied relief are almost unique, and are emphasised by the variety of climate and location . . . Each peninsula, therefore, had a different and distinct contribution to make to the common good of Europe. That is the main reason why the originality of Europe is political."

These quotations suffice to show how the geographical and the human elements are blended together in a stimulating study of the development of Europe. The reader will meet now and then with novel and even apparently startling points of view as when the author states boldly "Historically Africa has begun at the Pyrenees" and he then proceeds to explain how this concept in its application affords a clue to the development of France and Spain respectively; or again in the following parallel: "If peninsularity meant almost nothing internally to Iberia, especially to Spain, it meant almost everything to Scandinavia, especially to Norway, both internally and externally."

The book comes at the right time when the minds are being drawn to speculate on the possibilities of the noble, if complex, ideal of the United States of Europe.

P. C.

REGULATION OF BANKS IN INDIA, by M. L. Tanan Pp. 28. Price Re. 1. Taraporewalla.

That the banking organization of India requires to be considerably extended and improved is a fact which has been repeatedly emphasized by all students of Indian Economics. It is generally agreed that this state must play its part in bringing about the necessary extension and improvement. Principal Tanan has made, in this small brochure, a number of concrete suggestions for instituting the control of the State over banks. They deserve careful attention. They have been presented lucidly and references made to legislation in foreign countries are particularly instructive and valuable.

It is suggested that a minimum subscribed and paid-up capital should be prescribed for all banks according to the population of the town or the city in which they are situated. However, one feels that the figures

mentioned by the author are pitched a bit too high. For example, for towns of population between 20,000 and 50,000, the minimum figure recommended is Rs. 2,50,000. As a matter of fact, in cities with a population of nearly a lakh and a quarter, Co-operative Banks are known to be working very successfully with a capital of less than Rs. 2,00,000. These banks are proving very useful to the middle-class citizen.

State supervision in the matter of audit and bank administration should be made more stringent, in the opinion of the author, than it is at present. He proposes that a separate Bank Inspection Section under the headship of a Director-General of Banks should be added to the Finance Department of the Government of India. There should be also an Inspector-General for each province with Inspectors and others to assist him. These officers should have the power to go into all books and records kept by the banks and to make thorough investigations into and submit detailed reports about deposits, debts, credits, reserves, etc.

Several countries have created official agencies for this kind of supervision and check. However, where government is alien and not responsible to the people of the land, as is the case in India, there is the danger, that bureaucratic interference may cause mistrust and suspicion. The greatest care would have to be taken, under these circumstances, to ensure that governmental action would be entirely above any suspicion of partiality, apathy and patronage. State regulation must be a help and not a hindrance.

One would agree with the author that foreign exchange banks must be brought under control as well as the Indian Joint Stock Banks. They must be made to keep adequate resources to meet rupee liabilities, to publish statements about their Indian deposits, liabilities, advances and discounts and to maintain a certain percentage of qualified Indians in their higher grades of service. They must also submit themselves to inspection by government officials. Countries like Italy, Japan, Denmark, France, Czecho-Slovakia have put restrictions like these on foreign banks operating in their territory.

Many other suggestions made in the book are quite useful—for example, the suggestion that a minimum percentage of reserves against deposits be made compulsory or that loans to single firms, companies or individuals (including directors) should be restricted in amount and in duration. One would whole-heartedly support the author's view that full and clear statements of assets and liabilities must be published by the banks at short intervals and not only in English but also in the vernaculars of the province.

The price of Re. 1 for a small booklet of 28 pages must be considered to be exorbitant.

M. R. P.



THE INTERNATIONAL ASPECTS OF INDIAN EMIGRATION, by Dr. Lanka Sundaram. Pp. 37, Price 2s. 6d. East and West, Limited, London.

The author wrote a series of articles last year on the subject of Indian Emigration in the *Asiatic Review* and they have now been issued separately in book-form. An amount of information has been compressed in these pages and those who are interested in the problem of Indians overseas would read the book with benefit. A short historical account of Indian Emigration during the last century is followed by a discussion of the economic factors in which Indian Emigrants have to live. One is amazed to learn that the monetary value of the vested interests of Indians overseas works up to a total of £200 millions at a moderate estimate ! And 'this estimate does not touch even the fringe of the problem.' The chart given on pages 12 and 13 is equally instructive. It shows that Indians have migrated to all parts of the world. They have in all cases made remarkable contributions to the development of the country of their adoption. This loyalty and ability of theirs have been testified to by different committees and individuals, including Mr. Winston Churchill.

And yet serious encroachments have been made upon the lawful rights of Indian settlers by practically all American and African colonies to whom streams of emigration flow. The author has made a brief reference to prohibitory legislation against Indians in different countries like United States of America, Costa Rica ; French Indo-China, Dutch Indies, Panama, Australia, Canada and the States in Africa. It makes very sad reading. Even the glory of being a member of the British Empire is no shield for the protection of the honour and self-respect of the Indian citizen in the British Empire itself. The Cape Town Agreement of 1927 and the magnificent services rendered by the Rt. Hon. Srinivasa Sastri as the first Agent in Africa of the Indian Government are perhaps faint silver lines in an atmosphere which is otherwise very dark and profoundly gloomy.

The reader would wish that the writer had given a more detailed account of the indentured system. He has obviously taken great pains in collecting his information. The price of 2s. 6d. for a small booklet of 37 pages is, however, too high for the Indian reader to afford to pay.

M. R. P.

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FIXATION OF WAGES IN AUSTRALIA. by George Anderson, published by Messrs. Macmillan & Co., Ltd., Melbourne, 1929. Pp. 568. Price 21s. net

Fixation of Wages in Australia is a very welcome addition to the literature on industrial remuneration, particularly as it is affected by legislation. Although the book is intended mainly as a work of reference

on legal practice and theory affecting wages in Australia yet it throws considerable light on the need, possibilities and results of minimum wage legislation as well as on laws adjudicating between employers and employees on the vexed question of fair and equitable remuneration for industrial work.

The book has been divided into two parts. In Part I, Mr. Anderson describes the powers and functions of the Federal and the State Arbitration Courts in Australia. The Federal Courts derive their authority from the Commonwealth Conciliation and Arbitration Act of 1904 as amended in 1920 and 1926 which authorises the courts to require the parties to an industrial dispute to refer their cases to it for arbitration and award which is binding on the parties concerned. The various states have besides a number of Acts and tribunals which exercise similar functions. As a result there has been a considerable amount of overlapping and duplication of awards. It has, however, been agreed that no State Law can disturb, vary, or affect the award of the Federal Court which is thus regarded as a superior court, although each is independent of the other.

In Part II, the author discusses the law as it affects the fixation of wages in Australia. The consensus of legal opinion as judged by the trend of numerous legal decisions is for the Courts to insure that every workman shall have a wage which will maintain him in the highest state of industrial efficiency, which will enable him to provide his family with all the material things which are needed for their health and physical well-being, enough to enable him to qualify to discharge his duties as a citizen. These include enough of wholesome, nutritious, and sufficiently appetising food, a decent house containing at least four rooms, taxi hire, school fees, subscriptions, newspapers, charity, amusements, toys, stamps, stationery, etc. In 1907 such a basic or living wage for an unskilled labourer was fixed by Justice Higgins at 42 shillings per week. This living wage, however, varies according to the cost of living and has been more than doubled since 1918 according to the movement of prices, etc., recorded by the Commonwealth Statistician. The Courts also award an extra or secondary wage for arduous and dangerous work and for occupations requiring more than ordinary skill or intelligence. The wages of women and boys are also similarly determined by law courts according to their cost of living.

Mr. Anderson has taken pains to quote at length the judgments in important cases to substantiate every statement of theory and practice. In the opinion of the author minimum wages legislation in Australia has artificially raised the cost of living and offers no inducement to the worker to increase his efficiency. It has also increased the labour cost per unit of production in Australia and has necessitated successive

increases in the tariff in order to enable industry to bear the increasing cost of labour, thus involving the country in a vicious circle of ever-ascending costs and prices. Advocates of minimum wages legislation in India would do well to bear in mind these obvious evils of this much desired legislation.

R. B. G.

DEVELOPMENT OF INDIAN RAILWAYS by N. Sanyal, M.A. (Cal.), Ph. D. (London), Lecturer in Transport, Department of Commerce, Calcutta University. Published by the Calcutta University in 1930. Pages 397. Price not mentioned.

This book is an interesting historical resume of the development of Indian Railways from the earliest times up to the year 1928-29. Chapter I deals with the early schemes of an experimental nature before the year 1850. Soon the policy of Lord Dalhousie began to bear fruit, and "after years of anxious struggle the Companies won the battle." Chapter II deals with the "old" Guarantee System and is confined to the period 1850 to 1868, wherein "the policy of securing the construction of railways in India by private companies receiving guarantees of interest (of 5 per cent) on their capital outlay was vigorously carried into effect. . . , and remained in force until 1868, when it found a check at the hands of Lord Lawrence's Government." The Mutiny of 1857 proved the urgency of more rapid development. In 1858 the Parliamentary Committee was appointed "to enquire into the causes of delay." The Committee recommended certain simplifications of the arrangement by a "judicious adherence to the spirit rather than the letter of the contract" with a view to securing united action for one common object.

Other miscellaneous questions relative to the General Results—Financial, Working, and Traffic—and the development of rates and fares, are also examined with a view to tracing their gradual growth. As early as 1856-57 Colonel Pears drew the attention of the Government to the need of lowering fares and rates in Madras. "It was shown that compared to England where a labourer could travel 18 miles for a day's wages an Indian labourer could hardly travel four miles with a day's earning. The accommodation again was much less comfortable. The framing of charges on an analogy with England was strongly condemned, for, while Great Britain was characterised by industry, wealth, intelligence and energy of the highest order, India was just emerging out of disorder and depression. The main object of the Government in introducing railways was, in the opinion of Colonel Pears, to provide better and cheaper transit for the country, and it was rash to expect high profits from them

from the very beginning." With this view the Court of Directors were wholly in agreement. Thus the State began to take keener interest in the question of rates and fares. By 1865 the principle of fixing maximum rates was adopted with a view to safeguarding the interests of the public.

Another question of importance discussed in Chapter II relates to the provision of "adequate feeder roads to supplement the efforts of the railways towards securing easy transport." Stations in India have been constructed often two to four miles away from the busiest parts of the towns they are meant to serve. This has made the problem of approaches and feeder roads all the more difficult, and has permanently added to the cost of all classes of transport in India. Adequate approaches have not been constructed in many parts of the country even yet, and, as Dr. Sanyal rightly observes, "the consequences of this may become increasingly serious with the growth of road motor transportation"—a fact that has proved too true.

In Chapter III a critical estimate of the "Old" Guarantee system is made and its weaknesses exposed. Attempts were also made to form unguaranteed companies but with no success. Hence a modification of the old Guarantee system was made the objective. The State claimed that for various reasons it was desirable to acquire the lines as soon as possible. "The experience of the Government of India, the serious burdens that the construction of railways by private agencies entailed upon the State, and the difficulties of ensuring economy and checking extravagance, led Lord Lawrence's Government to advocate direct state construction and management." According to Lord Lawrence, it was wholly unreasonable and against the true interests of the country "to continue a system under which the revenues had to bear the whole risk of loss and could derive no direct profit, in preference to one, which with no greater and probably much reduced risks, could entitle the public to the whole of direct profits, making them available for reducing taxation or preventing the imposition of new burdens." Lord Mayo also agreed with these views, and in 1869 the Government of India again pressed for a definite change in the policy. The need for more effective control was recognised, and attention was drawn to economy and to the careful avoidance of all expense not required for the stability of the works or for the accommodation of the traffic. Hence a new financial policy had to be worked out, the adoption of which led to the introduction of many new schemes by the State. This entailed very heavy expenditure to which the attention of the Parliament was drawn, and from 1871-1874 a Select Committee on Indian Finance enquired into the question. In 1874 several restrictions were imposed upon the activities of the State. Another Select Committee of the Parliament limited the borrowing capacities, the

rule being that no new works should be undertaken with borrowed money unless likely to repay the interest on their outlay. This put a further brake upon the activities of the State, the annual maximum amount to be raised in any one year being £2½ million normally. It was also recommended to raise loans in India "unless the difference in the rate of interest was so considerable as to afford full compensation for the disadvantage of borrowing in England." These recommendations were followed by the State.

The narrative of how the construction of railways was carried into practical effect is an intensely absorbing piece of information, but it cannot be reviewed here for fear of making the review unduly lengthy. This is followed by the description of the various gauges adopted in India, wherein the "how" and "why" of their being adopted is also explained. Mention is also made of the Acts that have been passed by the legislature in India to secure the interests of the public and to confer all possible benefits upon the country. During the period under review, the question of rates and fares was again ventilated to consider whether any further reductions were possible, and attempts were also made to adopt a simpler system of classifying goods and fixing their rates.

In Chapter IV problems relating to Management, Control, Progress of Work, and results obtained during the period 1869-82, are discussed at some length. For purposes of financial administration Indian railways were classed under two heads in 1881-82—(1) the Guaranteed Railways, and (2) the State Railways. The E.I.Ry., which was purchased by the State in 1879 but was left to the company for management, found a special class under the heading: "State lines worked by Company." All other companies that had been started under the new policy were known as "Assisted Companies" the nature of assistance being different for different cases.

From 1869 to 1881 the total mileage of railways increased from 4,265 to 9,875 miles, the average increase being 468 miles per annum as compared with 250 per annum of the previous period. These figures speak for themselves. In the later part of the chapter figures for capital outlay, costs, and several other financial results are worked out. The Companies' lines yielded 6·20 per cent, while the State lines only 2·15 per cent. During this period the State suffered a net loss of about £15 million exclusive of interest and losses due to exchange.

Chapters V and VI are concerned with the history of railway development during the period 1882-1902. The policy of State construction did not bear fruit as was anticipated. Much of the capital was devoted to the construction of military and strategic lines on the N. W. Frontier, with the result that the State lines were burdened with a large amount of unproductive debt. Then followed a series of severe famines

in different parts of the country. Hence arose the question of the comparative merits of the railways and the irrigation works, as an insurance against famines. The Famine Commission of 1880 emphasised the great importance of railways, and an immediate addition of 5,000 miles of railways was strongly urged. The State not being in possession of funds had to seek the help of Companies once more. In 1883, the government pressed the Secretary of State for extending its powers of borrowing and for financial arrangements that might ensure a rapid development of the railways. A Select Committee was appointed in 1884 to thoroughly investigate the question. The committee reported favourably. Ultimately the policy of companies' lines side by side with state lines had to be adopted, the agency for construction and management to be determined according to the merits of each case. The remaining portion of Chapter V gives the historical details about the working of the new policy, which presents a rather dull reading, though valuable from the historical point of view. Minor problems relative to financial administration and legislation also find a place in Chapter V, which need no special mention.

With regard to railway rates and fares, the period under review is characterised as one "of competition and rate adjustments." In 1885, the Government proposed the establishment of a Clearing House for Indian Railways, to settle all inter-railway disputes, and to secure unification and simplification of rates and classification of goods. In 1887 maxima and minima rates were fixed by the State to protect the public interests on the one hand, and to secure the State against reckless and ill-considered charges that might imperil the financial stability of the Government on the other. The Resolution of 1887 is considered to be the most important document in the matter of rates policy of Indian railways. The Companies were allowed full liberty within the maxima and minima rates. Facilities for through rates and services were urged, undue preference was condemned, and the classification prevailing on the E.I.Ry. was recommended to be adopted by all companies.

Chapter VI is devoted to the study of facts and figures relative to management and control of the railways during the period 1882-1902. A review of the progress of work during this period is made, where in some important changes have been indicated. After years of losses, the railways in India began, in 1900, to show some profits to the State. The net gain during 1900-02 was about Rs. 175 lakhs. The growth of traffic during the period was very large. The number of passengers carried per annum increased by 234 per cent and the tonnage of goods by 207 per cent between 1882-1902. The increase in mileage was 158 per cent. In spite of the lower charges the income from passengers and goods increased by 152 per cent and 109 per cent respectively during this period.

Attention has also been drawn to the fact that the railways have wholly ignored the conveniences of the third class passengers, and the less-paying first and second class passengers have been given all attention. The corrupt practices of the railway officials have also been shown in this chapter. Several other deficiencies in the working of the railways are also noted down.

Chapters VII and VIII are devoted to the historical survey of the railway development in India during the period 1903 to 1924-25. In 1901 Mr. Robertson was appointed to enquire into the administration and working of the Indian Railways. The question of "State vs. Company" management was the main thing that engaged his attention. He considered state management to be disadvantageous, and recommended that all lines be leased out to companies. Public opinion in India, was however, opposed to company management of foreign origin, and insisted on state management. In 1908, Mackay Committee examined the problems of Indian Railway finance and administration. Again in 1920, the Railway Committee under the chairmanship of Sir William Acworth was convened to consider the question of management and financial control. The Committee recommended the separation of the Railway Budget from the Central Budget. On the question of management the Committee were however divided. The Chairman's party favoured State Management and the other party advocated Company management of the Indian domicile. In regard to the raising of capital, the Chairman's party considered the State to be the only agency for raising loans, whereas the other party recommended that loans may be raised both from the public and private agencies. After a good deal of fight, in 1924, the Budget was separated by legislature, and the policy of State management was finally adopted. Accordingly in 1925, the E.I.R. and G.I.P.R., were taken over to the State management. Proposals to re-organise the Railway Board were also made by the Acworth Committee. Most of their recommendations were accepted by the Government. The formation of Railway Rates Tribunal, and of the Central and Local Advisory Councils, as also the question relative to gauges were also considered by the Committee, and recommendations made.

In Chapter VIII facts and figures relative to administration and working during the period 1903 to 1924-25 are given in detail. The total mileage on 31st March, 1925, was 38,270 miles. The progress of railway construction was slow in the pre-war period; and during the war activities were more or less suspended. In the post-war period progress was handicapped owing to high prices and wages. Details about the financial results are also given. During this period the net earnings of the railways rose from Rs. 18.9 crores to Rs. 45.4 crores a year, and the average percentage of net five-yearly earnings to the total capital

outlay varied between 5·2 per cent and 5·8 per cent. The highest percentage yet obtained in the history of Indian Railways was 8·09 per cent in 1918-19. In 1921-22 a setback was again experienced, and railways again became a burden to the state. By persistent economy condition again improved in 1924-25. There has been a steady growth both in the passenger and goods traffic during the period under review. Goods tonnage increased faster than passenger traffic during the war, the growth being about 10 per cent as against a nominal increase in passengers. The post-war passenger traffic shows a growth of 32 per cent while goods tonnage increased by 17 per cent only. Other interesting details *re.* the growth of traffic are also given. The working results are also given in minute detail. These, however, present a dull reading, and are collected a little incoherently.

In Sections 6 to 11 of Chapter VIII several interesting problems are discussed. Among these are. War and the Indian Railways; Measures for Economy and Improvement. Grievances of Third Class Passengers; Neglect of Indigenous Industries, and the Policy of Stores Purchase; Indianisation and Staff Problems, and other Miscellaneous Problems relative to Statistics, Audit and Accounts, Advisory Councils, Accidents, etc. Dr. Sanyal seems to have taken great pains in collecting information in regard to these topics, which is of a valuable character.

Chapter IX is devoted to the development of the railways that has taken place during the four years 1924-25 to 1928-29. As recommended by the Acworth Committee railway accounts have been separated from the central accounts. This change has been highly beneficial. The Legislative Assembly and the Council of State have begun to take an increasing interest in all railway matters, particularly of a semi-political nature. Such a control by Legislature has proved to be satisfactory so far, but it is feared that "the Railway Board will be faced with greatest difficulty in keeping a balance between the commercial administration of the railways and the political demands of the legislature." As Dr. Sanyal rightly observes: "The time has perhaps come to discuss and devise a new machinery, for the control and administration of the railways, which while ensuring proper regard for the interests of the country, will secure expert and independent management of the lines, free from the dangers of too much political interference."

In section 2 of this Chapter certain outstanding events such as the Electrification of railways, Rates Advisory Committee, Workshops Reform, and Publicity, are discussed at some length, which are at once interesting and illuminating. In sections 3, 4, and 5 of this Chapter statistical details about the Financial, Traffic, and Working Results during the period under review are given with elaborate minuteness together with illustrative charts and diagrams all of which give us a vivid idea about the progress



of railways during the period. In section 7 of the chapter reference is made to the ever-increasing motor competition on the roads, which is beginning to be felt by the railways nowadays. Then follow the concluding remarks in section 8, which close the tale of railway development up to 1928-29 in a fitting style.

Such is the story in brief of the railway development. The book is indeed an interesting compendium of information, and deserves a close reading of all students studying transport for their post-graduate courses. The interest of the story is constantly kept in view by the author, though at places the reading is rendered dull and dry owing to the incoherent display of figures. This defect could have been well obviated by the use of a few more charts and diagrams. I congratulate the author, all the same, for the excellent book he has written.

B. S. A.

[STATISTICS IN SOCIAL STUDIES. Edited by Stuart A. Rice for the American Statistical Association, published by the University of Pennsylvania Press. Price 12s. 6d. net.

This book is written by twelve different statisticians of note of the various American Universities, with a foreword by the Editor, Prof. Stuart A. Rice. The attempt is indeed a novel one, and is designed to suggest ways and means to measure the immeasurable. Twelve different topics from the social field are chosen, and each writer makes a special study of the social problem undertaken, the object being to indicate the development of statistical method in social sciences.

Paper I on "*The Historico-Statistical Approach to Social Studies*" is written by the Editor, Mr. Rice, wherein he has remarkably shown how the genetic and historical studies can be pursued in relation to the statistical details available in the social field, in much the same way as such studies are feasible in the commercial and financial problems, the only difference being in their degree of accuracy. Social studies, though less certain at present, are likely to yield quite satisfactory results in the future provided sufficient care be taken to collect data relative to such social studies and with the same vigour as is evidenced in the commercial field. The uses of such historical statistics of social and sociological data would be many, particularly of "serving the public good." But there are several difficulties in pursuing such a study—want of incentive, loose character of the data, difficulties in defining the units, etc.,—all which will have to be got over, if social studies have to be carried on successfully, and some "social index" will have to be worked out.

Paper II on "*Statistical Studies of Marriage and the Family*" is written by Prof. W. F. Ogburn of the University of Chicago. In this

is explained the extreme inadequacy of the statistical data available in different parts of the world. The difficulties are explained, and ways and means are suggested to improve upon them. Methods to correlate such data with different social statistics and phenomenon are also shown.

Paper III on "*Statistical Studies of Health and Medical Care*" is written by Prof. Hugh Carter of the University of Pennsylvania. Herein are examined the various difficulties that present themselves of defining the units, and of sampling, etc., which receive detailed consideration.

Paper IV on "*Statistical Studies of Dependency*" is written by Prof. Ralph G. Hurlin of the Russel Sage Foundation. Statistics relative to dependency are fairly completely available for different nations, yet they hardly justify any conclusions of any value. This is too true. Prof. Hurlin discusses this problem with great ability, and shows how an improvement can be brought about in dealing with such statistics.

Paper V on "*Statistical Studies of Race Relations*" is written by Prof. Donald Young of the University of Pennsylvania. Such a study is needed to know the development of social status of a race. The subject-matter presents an interesting reading, though the value of such a study is more or less problematic. The field is as yet little explored.

The next two studies—"*Of Crime and the Administration of Justice*" by Prof. C. E. Gehlke of the Western Reserve University and "*The Beginnings of Judicial Statistics*" by Prof. L. C. Marshall of the Institute of Law, John Hopkins University—are an attempt to show how crimes can be measured and what difficulties have to be encountered in measuring their extent; as also to gauge the extent to which dispensation of justice can be measured. The latter study is specially fruitful in pointing out the way in which judicial statistics can be made more complete.

Studies Nos. VIII and IX "*Prohibition: Statistical Studies of Enforcement and Social Effects*" by Prof. John C. Gebhart of the Association Against the Prohibition Amendment, and "*Fallacies in Prohibition Statistics*" by Prof. Herman Feldman of Dartmouth College are by far the most interesting studies in the whole book specially the former which is at once practical and complete with the latest statistical data. The liquor problem is indeed a big problem to be faced in all civilised countries of the world. Prof. Gebhart deserves congratulations for having made such a thorough enquiry into the liquor problem in the city of New York. His charts and diagrams deserve special mention; for their illustrative value is beyond doubt. Comparisons with foreign countries make the problem still more realistic. The fallacies pointed out by Prof. Feldman are noteworthy inasmuch as

these try to criticise what Prof. Gebhart has tried to establish in the foregoing study. Study No. X "*A Critical Examination of Certain Prohibition Statistics*" by Prof. Fisher further tries to criticise the statistical data presented in study No. VIII of Prof. Gebhart. These three studies are complementary to one another, and prove that Prohibition has not been much of a success.

The last two studies are by far the most mysterious. In Study XI Prof. Rice tries to study the "*Social Attitudes and Public Opinion*" statistically. The Commentary of Prof. Thurstone is significant. The last study of Prof. Kirpatrick is concerned with "*Personality and Personality Maladjustment*." It is equally interesting, and as mystifying as the previous one: Both these studies aim at measuring the most immeasurable items in the field of social statistics.

Thus the whole book is an attempt to measure the social phenomenon with a greater degree of certainty than has been possible hitherto by statistical method, and by an analysis of facts and figures about the society. The book would form an excellent introduction for all students of statistics, who aspire to carry on research into the social problems statistically. It deserves a careful reading at the hands of all Indian students who desire to take their M.A. degree with Statistics as one of the optional subjects from any one of the Indian Universities where this subject is taught. The book is excellently written and deserves "all praise and no blame."

B. S. A.

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ECONOMIC INVESTIGATIONS IN THE HYDERABAD STATE, 1929-30, Volume I, (General Survey), by Mr. S. Kesava Iyengar, M.A., Special Officer for Economic Investigation, H. E. H. the Nizam's Government. Published by the Government Central Press Hyderabad (Deccan); pp. 178+ix. Price Rs. 5 or 7s. 6d.

The investigations were made by Professor S. Kesava Iyengar and his assistant under the orders of H. E. H. the Nizam's Government with the objects of ascertaining—

- (i) the sizes of agricultural holdings;
- (ii) to what extent the holders cultivate their land and on what terms and the conditions on which they sublet to others;
- (iii) to what extent the registered holders of land have been dispossessed of their holdings during the last 25 years;
- (iv) the extent of the indebtedness of the existing holders; and
- (v) the manner in which the holders obtain their seed and dispose of their produce.

At first the investigations were made in eight villages of the district of Mahboobnagar and Nizamabad in 1928. Further investigations were made in 48 villages of the districts of Nanded, Aurangabad, Warangal and Raichur during 1929-30. The investigations were thorough and complete.

Professor Iyengar with his assistant 'camped in each village for several days and obtained there information by interrogating the head of each family and by examination of village records and books and documents produced by moneylenders.' Mr. Iyengar says that the cooperation afforded by the villagers in the carrying on of the investigations was on the whole laudable and no need was felt at any stage of the inquiry for either police assistance or the use of magisterial powers.

This volume is divided into six parts; the most important of all is the first which gives the general survey of the conditions in all the six districts. The other five parts contain notes on economic investigations in each district. On account of the scope of investigation being narrow, the information contained in the report does not give us a complete picture of the economic conditions of the people living in the rural areas of the Hyderabad State. Nevertheless it contains information which has a great economic value. The average size of holdings in the villages selected for investigation varies from about 8 acres in the Warangal district to about 27 acres in Mahboobnagar. Thus the average size of holdings in the State is greater than that of most of the Provinces of British India. But the land is of poor quality and Professor Iyengar thinks that 15 acres of dry land or 5 acres of wet land in the State would have a sufficient productive capacity to support a family at a reasonable standard of comfort without any help from outside sources. Judged by this standard, more than 50 per cent of the cultivators were found to possess uneconomic holdings. Similar investigations with regard to uneconomic holdings should be carried on in different provinces of British India at an early date.

The economic condition of people living in the Hyderabad State does not seem to be better than that of people living in British India because we find that underfeeding by stifling appetite is being resorted to by a large number of families in the State (page 23) and the non-mortgage debt alone per resident family varies from Rs. 72 in Mahboobnagar to Rs. 126 in Aurangabad District (page 29). Moreover, we also find that the position of landless labourers in the districts of Raichur and Warangal is far from satisfactory and the terms under which the *Baghelas* work in the Warangal district are discreditable to both employers and employees.

We hope that His Exalted Highness' Government will study this valuable report very carefully and will soon take all necessary steps to bring about rapid improvement in the economic condition of the people of the State.

We congratulate Mr. Iyengar for writing the excellent report and we commend it to all the students of Rural Economics for careful study.

D. S. D.

THE ESSENTIALS OF FEDERAL FINANCE, by Mr. Gyan Chand, M.A.,  
Department of Economics, Patna College. Published by Oxford  
University Press, London, pp. 419+xvi. Price 11s. 6d.

The book under review is a very timely contribution to the problem of financial readjustment in India. The arguments of the book are based on the assumption that India will be self-governing in a very large measure in the immediate future. The book contains ten chapters. The first chapter gives the problems to be discussed in the body of the book. The next three chapters give the history of Provincial Finance and bring into relief the defects of Meston Settlement. In the fifth chapter the financial settlement in some of the federal states of the world are summarised. The sixth chapter shows how the re-allocation of the sources of income should take place in the Indian Federation. With regard to the existing resources, the author does not think any re-allocation necessary. He would leave custom, salt and income-tax to the Central Government. He suggests re-imposition of cotton excise duty, doubling of the salt tax, imposition of a tax on tobacco, increase in import and export duties and increase in the rates of the income-tax with a view to increase the resources of the Central Government to the extent of 25 crores of rupees per annum. To increase the resources of the Provincial Government he suggests the imposition of Inheritance-tax and a tax on the capital value of land. It appears to us that the author has not carefully considered the incidence of all the new taxes that he has proposed. Taxing of tobacco, the doubling of the salt tax and the re-imposition of cotton excise duty would greatly increase the burden of taxation on the poor classes of the people, which is already much heavier than that on the middle or the rich classes. If the suggestions of the author are followed the Indian tax system would become still more inequitable. Undoubtedly the suggestions of the author are tentative and if any need is felt for additional taxation when the Federation of India has been accomplished only those taxes should be levied which would fall mostly on the rich and middle-class people who, for some reason or other, are being lightly taxed at the present time.

In the seventh chapter the author discusses the problem of the re-distribution of revenue. He strongly urges the Central Government to reduce the expenditure by 10 crores of rupees per annum and suggests

the granting of subsidies and special initial assignment by the Central Government to the Provincial Governments as follows:—

Provinces	Subsidies		Special assignments
	Lakhs of Rs.		Lakhs of Rs.
Bengal ...	...	467	175
United Provinces ...	...	454	100
Madras ...	...	423	—
Bihar and Orrisa ...	...	340	300
Punjab ...	...	206	—
Bombay ...	...	191	—
Central Provinces and Berar		140	100
Burma ...	...	132	—
Assam ...	...	76	100

Subsidies would be on the basis of population and special assignments would be according to the special needs of some provinces. The author also suggests a progressive increase in special assignments to 13 crores of rupees in the fifth year. The payment of special assignment would depend upon each province fully developing its own fiscal resources. He also suggests the granting of subventions to the extent of nearly two crores of rupees for specific purpose like road development. The scheme undoubtedly deserves careful consideration. We feel that Provincial autonomy would be impaired by the granting of assignments or subsidies by the Central Government to the Provincial Government under any condition. Therefore instead of increasing the resources of the Central Government we would like to increase the revenue of the Provincial Government by transferring some sources of revenue from the Central to the Provincial and by giving the Provinces more powers of taxation. It would be much better if the Indian Central Government is allowed to retain most of the indirect sources of taxation only, while the Provinces are given powers to levy all forms of direct taxes.

In the eighth chapter the question of financial relation between the Central and Provincial Government has been thoroughly discussed and the suggestions have been made for the formation of the National Finance Commission and National Loans Council. What the fiscal relations of the Indian States with British India should be is given in the ninth chapter. The last chapter gives the necessary conclusions.

The diagrams given after page 82 are not sufficiently self-explanatory. The book contains many original ideas and is very thought-provoking. It will surely be useful to all those who are interested in the problems of Indian Federation. It will also be useful to the students of Economics.

D. S. D.

**HYDROSTATICS** by D. K. Sen. Messrs. Macmillan & Co. pp. 242.

This volume will be a suitable text-book for those students who have only a very elementary knowledge of the symbols and operations of calculus to start upon. The book introduces the reader to the subject of Hydrostatics in a simple and interesting way without sacrificing mathematical rigour. Even in the exposition of the elementary theorems, the author has avoided the usual sort of loose thinking and reasoning which is quite common in many text-books on the subject. Demonstrations by elementary methods have also their advantages and along with the alternative (and the powerful) methods of calculus they may serve as a safe guide for those who hope to pursue the subject in more advanced treatises in future.

The arrangement of chapters and the development of the subject is clear and distinct. Throughout the book arguments and calculations, aided by diagrams where necessary, are set out clearly. There is a good number of illustrative examples which serve to make clear some of the points which often trouble the beginner. The chapter on centre of pressure is written at length; and alternative methods, well illustrated by examples, have been given. The book gives a fairly large number of problems to solve with a nice selection at the end of each chapter for the more ambitious student.

The book is well printed and the publishers deserve congratulations on its good get-up.

A. C. BANERJI

**A MONOGRAPH ON THE SEPARATION OF EXECUTIVE AND JUDICIAL POWERS IN BRITISH INDIA**, by Naresh Chandra Roy, M.A., Lecturer in History, City College, Calcutta, 1931. Rs. 5.

This small book is a very lucid exposition of the desirability of the separation of Judicial from the Executive powers. The author argues that the legislature may lay down good and wholesome laws. But they would not be of any avail if they are not ably, promptly and impartially applied. The Judge therefore is the Guardian of the rights and privileges of the people against the encroachment of private persons and the aggression of executive officers. He should have the independence to bring under review executive action. In order to instal him with this indispensable quality complete separation of the Judiciary from the executive control is necessary.

Chapter I contains the Introduction. The author herein talks of the independence of all external control being the basic quality of the Judiciary. He refers to the theory of Montesquieu that the three

branches of government the executive, the legislature and the judiciary should be separated and clearly distinguished from one another. This doctrine of separation held long the imagination of the people of Europe and America but in the practices of the present-day world there has been a wide departure. So far as the relations between the executive and the legislature are concerned the doctrine has certainly been completely thrown overboard by the leading states of Europe taking to the parliamentary form of government in which the executive and the legislature are not only not separated but the executive is really a committee of the legislature.

In chapter II the evolution of the system of separation is detailed. It is mentioned that in the eighteenth century the administrative system had absolutely broken down in India. In those rough and troublesome days, concentration of powers and the unity of authority were the principles advocated and accepted.

In Chapter III we read the history of the movement for separation which is very interesting. The controversies on the subject have been fully dealt with and one point has been brought out to special prominence. Those who favour combination do not dispute the wisdom of separation but they argue that "The true theory of Indian Government is the entire subjection of every court officer to the officer at the head."

In Chapter IV the evils of combination to magistracy are discussed.

In Chapter V the argument is carried further and it is shown that even higher officers of the judiciary cannot breathe the independence necessary for the maintenance of impartial judiciary. All except judges of the High Court are subject to the influence of the executive, so runs the dictum of the author.

In Chapter VII arguments against separation have been criticised and in Chapter VIII suggestions have been made for complete separation.

The first objection against separation is that it would militate against the traditions and genius of the Indian people. The author replies that old institutions have no doubt a claim upon the reverence of the people but that should not mean that a proved anomaly must not be removed simply because it has a history behind it.

The next objection of the 'unionists' is that the present system does not really militate against the independence of the courts of law.

The author calls this statement inaccurate. Here and there, there may be high spirited, conscientious judicial officers who are not ready to allow their judicial discretion to be warped but they are only exceptions and the general rule cannot but be that the subordinate officers act up, in their judicial capacity, to the orders and the desires of their executive chief.



Another objection which has been seriously talked about is the financial strain which separation would bring about. The author calls it a bogey raised to ward off the reform which cannot be challenged quite effectively otherwise. The author believes that the amount required cannot be very high and there is no reason why it cannot be found when so much money is being spent for departments, to improve which the Government have the mind.

The author in his last chapter enunciates the principles on the basis of which the separation of executive and judicial functions should be effected. He pleads that there should be separation from recruitment onwards.

The executive officers have to be recruited on the basis of their general education and outlook. It will be unwise to demand of them any specialised knowledge. Those, however, who will be required to perform judicial duties, must have a comprehensive legal training. Law is, however, the life-breath of the judges. Thorough and scientific knowledge of law is of primary importance to them. Nor is merely the theoretical knowledge of legal principles enough. They must have some years' practice at the bar to get accustomed to legal procedure and the atmosphere of the law courts. Experience of some executive departments may to some extent broaden the outlook of the future judge. But a sufficiently long practice at the bar no less develops in him an insight into human nature and a knowledge of men and things. Besides, it gives him a valuable experience of the happenings behind the scenes. The law courts are themselves a training ground. Here they move in a legal atmosphere and come into touch with diverse people and various objects of study. A judge recruited from the lawyers of some experience hence enjoys many advantages from the absence of which his colleague who has never before his promotion to the bench, been inside a law court, must suffer.

The Magistrates should on no account belong to the same corps as the executive officers. They may be amalgamated with the Munsifs and the two together may constitute a separate judicial service. All powers of transfer, promotion, reduction, and dismissal should be vested in the High Court. The Judges of the High Court should be recruited direct from the bar. Though they will be appointed by the Government they should enjoy the security of tenure of office during good behaviour and they should expect no promotion at the hands of the Government. The Chief Justice thus will not be recruited from among the puisne judges but direct from the bar.

The appearance of the book is opportune and the author is to be congratulated on the lucid exposition he has given. Methods may differ and different persons may produce different theories but it is agreed on all

hands that separation is desirable. Even the advocates of the "Union theory" do not dispute its efficiency, their difference comes out of regard for expediency. And expediency has different meanings at different times and it is not too much to hope that in the changed order of things expediency and efficiency would be duly weighed.

K. S. P.

#### ADMINISTRATION REPORT OF THE IDAR STATE FOR THE YEAR 1928-29.

Idar is a small state in Gujarat with a population of 2,26,351. The density of population per square mile is 136. This shows that the state is thinly populated and the Report informs us 'that efforts are being made to induce outside cultivators to come and reside by offering them terms as there is much cultivable land lying unoccupied and that 41 families of cultivators from outside came and resided in the state during the year under report.' The paternal care with which the subjects are being governed is indicated by the following remark: 'The severe cold and frost in the beginning of February 1929 destroyed the Rabi crops and caused great loss to the cultivators. The budget had to be revised and *expenditures under various heads were curtailed.*' We would have desired the report to inform us as to under what heads the expenditure was cut and what "nation-building departments did not materially suffer by the axe of retrenchment. But the same can be easily inferred from the tables No. 25 appended at the end in which we read that the number of pupils in A. V. schools grew from 659 to 1,033 and those in primary schools increased from 3,321 to 3,942, showing that education at least did not suffer from retrenchment. Unfortunately, we cannot speak in the same complimentary tone when we read that "the work of revision settlement was not taken up for over 40 years, although it had been due," and later the same "was taken up in 1919-20 and though ten years have elapsed, not even half the work is done." In the next para the report supplies us with a table and makes a remark 'The above figures will show that only one-third of the work is done.' This forced the hands of the administration to resort to an empirical increase, which although termed 'Sawai,' is actually 100 per cent in most of the cases. The total ordinary revenue of the state is a little above 13 lakhs, which means that the taxation per head is about Rs. 6. This is certainly lighter than what is borne by a citizen of British India. The chief sources of income are Land Revenue, 6 lakhs, Customs, 3 lakhs, and Excise, chiefly tax on liquor, 2 lakhs nearly. We do not find any mention of income-tax at all, no death duties, no entertainment tax. This shows that many of the taxes are indirect and that the upper strata of society fails

to contribute its quota to the revenues of the state. On the expenditure side the following figures will be interesting.

	Figures in 000
Domestic Charge ... ..	378
Electric Department ... ..	47
Palace Dispensary ... ..	5½
Private Secretary's Office ... ..	4
Household Controller's Office ... ..	1½

Total ... 436

The figures show that about 4½ lakhs of rupees out of 13 lakhs are being spent on Royal household. This is certainly a heavy charge. I would desire Mahatma Gandhi to appeal to Indian Princes, not to spend more on private account than what will be given to the officers of higher grade in the future National Government of India. But it is no use being severe on Idar State only. All know that there is the same tale to be told everywhere else, whether in Native or British India at present.

One noteworthy feature of the Report is that it mentions the industrial potentialities of the state, which deserve wider notice than its mention in the annual reports of state administration.

—R. V. O.

A REVIEW OF INDIAN COTTON FOR THE SEASON, 1929-30. Published by Messrs. Chunilal Mehta & Co., 51 Marwari Bazar, Bombay.

The publication of this annual review by Messrs. Chunilal Mehta & Co. on behalf of several cotton associations in Bombay, New York and Liverpool is useful in several ways. It puts the subject into a non-official, business perspective. It exposes many of the popular fallacies to which, unfortunately currency is given by the half-baked newspaper articles. We would earnestly desire such reports to be translated into vernaculars of the country, particularly Hindi and Gujarati. The present review graphically describes the period of depression that has set in since 1924. There can be conveyed some idea of this depression to the average reader if it is told that while in 1923-24, 5162 thousand bales of cotton were approximately valued at Rs. 1,31,89,00,000, in 1929-30, 6685 thousand bales were valued only at Rs. 59,30,00,000. The misfortune in the case of Indian cotton has been that "during the past season it was sold much below world parity," but for which the aggregate value of the crop in 1929-30 would have been, according to the Review, better by at least 12 crores of rupees. The Review further says, "Undoubtedly this loss on account of low parity price of Indian cotton was almost entirely due to the policy of dear money followed in this

country, and the consequent gradual diminution in the capacity to hold cotton. In the absence of adequate financial accommodation in the up country cotton was rushed into the port of Bombay and *holders of cotton were practically at the mercy of the exporters who exploited the distressed economic situation to their fullest advantage.* This cheapness of Indian cotton in parity was something like a bounty to foreign spinners and although import duty on cotton goods was raised, this disadvantage was offset by the comparative cheapness of Indian cotton."

No comments are necessary!

—R. V. O.

THE FALL OF PRICES, by John A. Todd, M.A., B.L., Oxford University Press, London. Humphrey Milford. 1931. Pp. 68. Price 2s. 6d.

In this brochure, Mr. Todd discusses the causes and cures of the recent fall in prices. There are three causes to which this fall has been attributed. They are (1) inadequacy of gold, (2) increased production, and (3) decreased consumption. With regard to the first cause, after going into the facts of price movements and gold supply he arrives at the conclusion that "as far as England is concerned, the verdict, up till now, must be the Scotch verdict of 'Not Proven.' As to other countries, complete evidence is not available, but there is a strong presumption that what is happening there is similar. So far as gold is necessary for banking purposes, there is more gold available today than there has been ever before; and the fact that it is now concentrated in the banks, instead of being adrift in the pockets of the people, greatly increased its efficiency." In regard to the second and third causes, he agrees with the view that production of goods has greatly increased and that their consumption has considerably decreased. But the decrease in consumption, he holds, originated in America after the Wall Street collapse of October 1929 and spread to the rest of the world from that country. He altogether loses sight of the reduction in consumption, whatever its amount—which must have come about in some countries owing to political movements and civil wars therein independently of what happened in U.S.A. But this much must be said for him that his theory does not seem to be without any basis.

As to cures, the author does not say much that has not been already said. The balance between production and consumption should be restored but it should be by inducing increased consumption rather than by restricting production. In his own words, "A new balance must be struck between actual production and genuine consumption; and in the present state of the world it will be a pity if the balance comes down on the side of restricting production, for the world could do very well with

all, it can get of these staple raw materials, and any artificial restriction of supply is to be greatly regretted." To stimulate consumption, he pleads for a reduction of prices, wholesale as well as retail, and a removal of all artificial restrictions like tariff walls on the free movement of goods throughout the world.

And in so far as monetary difficulties may be held responsible for the fall of prices, they should be removed by increased gold production which is not impossible as new sources of gold can be discovered, and by economising in the use of gold by having more silver currency and cheaper cheques. Further international gold movements which sometimes become necessary owing to one nation having to make immediate payments to another nation should be attempted to be avoided by adjustments through an International Clearing House which should be set up for the purpose. He says that the Bank of International Settlements at Basle established to deal with German reparations might very well develop into such a Clearing House.

—G.D.K.

**THE DEVELOPMENT OF ECONOMIC DOCTRINE—An Introductory Survey**  
by Alexander Gray, M.A. Longmans, Green & Co., London,  
New York, Toronto. 1931. Pp. 384. Price Rs. 5.

As the title of this book indicates, the book is simply an introduction to the history of economic doctrine. It is meant to be used by the beginner. The beginner has to hear of the tenets of the Mercantilists, of the Physiocrats, of Adam Smith, Malthus and others, and if he has to refer to works like Haney's or Gide and Rist's that are "too full, too comprehensive . . . too good" for him, he is likely to be confused. Before he goes to these works he requires in his hands a book that will deal only with the landmarks. The book under review is of this type. It does not concern itself with all the different names that one comes across in a study of the development of economic thought but only with those that are typically representative of one school or another or those who contributed something fundamentally important to economic theory. For example, in dealing with the Middle Ages, the author has concentrated his attention on St. Thomas Aquinas; in discussing the Physiocrats, he places emphasis on Quesnay, so on, so forth.

As an introduction, the book cannot be praised too highly. It is written in a very pleasing style and the tedium one feels while going through a book like Haney's is not met with in a study of it in the least. Moreover, the economists whose theories are examined are dealt with in a comprehensive manner. And what may be regarded as a very important

feature of the book is the logical and excellent arrangement of the subject-matter of each chapter.

We whole-heartedly welcome the book and unhesitatingly recommend it to our students.

—G. D. K.

WELFARE PROBLEMS IN RURAL INDIA, by A. P. Pillay, O.B.E., M.B.B.S.  
Publishers D. B. Taraporewala Sons & Co.

It is a welcome sign of the times that the attention of public workers in India is in an increasing measure being attracted by problems of social welfare. The need for constructive reform is indeed very pressing all over India, but nowhere is it so much of a vital necessity as in the rural areas. Underlying the diversity of rural problems in the different provinces there is a substantial uniformity, and it is in the utmost interest of the economy of public effort that the experiences gained in one province should be readily available to workers in other provinces. The book under review is a very welcome addition to the stock of books dealing with the varied problems of rural India. Two peculiarities of the book deserve to be specially noted. In the first place, the problem of rural reform and development is viewed in a comprehensive fashion. In fact Dr. Pillay claims that the point that is specially stressed in his book is that the general uplift and health questions have to be dealt with as a whole and not in compartments. Side by side with the problems of health and maternity welfare, which are principally treated in the book, other cognate matters such as population, rural administration, and sex education have been dealt with in outline. Part two contains a very interesting and instructive series of descriptions of the existing methods of rural uplift that are being pursued by prominent workers in the various provinces. Information from firsthand sources is forthcoming from such distant quarters as the Punjab, Sind, Bombay, C.P., and Madras. There are also three very interesting articles on work carried on in the same field in Australia, United States and Great Britain. In part three a number of useful practical suggestions have been offered to the would-be rural reformer. These emanate from people who have actually worked in the field for many years and are calculated to serve as guides to workers in other places. Many of the chapters in the book are in the shape of specially contributed articles by such noted social workers as Dr. M. Subramanyam, Mrs. D. Mitra, Miss R. Piggott, Mr. F. L. Brayne of the Panjab, Mr. L. A. Hogg, and Mr. Ramrai Mohanrai. The book is excellent in its get-up and illustrations, and should find a place in the library of all social workers and institutes for rural reform. Dogmatism of expression has been avoided as a rule and hence the interested reader can rely on the material

for his guidance. In common with all other workers in the field of national reform the author laments the attitude of indifference towards such problems exhibited by the state in India. To the extent to which the government of this country becomes a government of the people to that extent only can it be trusted to be carried on in the interest of the people themselves. It is hoped that in the near future the responsibility for constructive reform at least in the provinces will be enjoyed by the peoples' representatives. The present book deserves the careful study of all those who profess to be the friends of the rural population of India. The Sholapur District scheme of rural reform with which the author of the book was actively associated for a long time and which has been exhaustively discussed in the book will be of immense interest to rural workers all over India.

D. G. K.

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AN ECONOMIC AND COMMERCIAL GEOGRAPHY OF INDIA, by B. B. Mukerjee, M.A., B.L., Principal, B. and O. C. Training Institute, Sabour (Bihar). Published by Thacker Spink & Co., Calcutta and Simla. Pp. 168. Price Rs. 3-12.

We accord our cordial welcome to the book under review, for it not only meets a long-felt need but is also the only treatise of its kind dealing with the topic principally from the Indian point of view. Consequently, there can be little doubt that it is a valuable addition to the already existing works on the subject.

The author mentions in the Preface that his book "does not lay any claim to originality. . . ." This may be true; but he marshals his facts in such a good order and his style is so graceful that every page is a pleasure to read. His competent knowledge, admirable literary equipment and scholarly style enable him to provide his readers with a comprehensive analysis of those principles which are necessary for an intelligent comprehension of Geo-economic pursuits. The descriptions, though too brief, bring out the salient characters of the topics concerned; and the book on the whole presents a vast store of information in a highly condensed form.

Readers will greatly appreciate the efforts of the author who has successfully compressed for their advantage the opinions of the leading contributors of the subject within pleasantly readable compass without omitting anything essential. This will largely obviate the necessity of reference to other books in the course of their reading. The introduction of comparative figures for other countries with a few curves and diagrams has undoubtedly increased the value of the book; but this would have been all the more enhanced had the statistical information been presented for the most part in diagrammatic form. Pictograms and statistical maps

convey impression of relative figures more clearly than do mere figures, howsoever significant they may be.

However, the main object of the author is to write a book which may prove really useful to students and teachers. In achieving this object, he has surely succeeded. The book is lucidly written in an attractive, entertaining, and forcible language. Paragraphs are short, numerous geographical details are avoided and figures are set out in well-constructed tables, so that it is easy to comprehend the facts relating to some particular matter.

We highly recommend this little volume for the use of all those who want to acquaint themselves with the economic and commercial geography of India.

—S. L. A.





# CAN INDIA BECOME A CREDITOR COUNTRY

BY

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## SUMMARY

Financially viewed India is a debtor country on capital account. The first signs of creditor relationship which have occurred quite recently have raised alluring hopes of the future financial status of this country as an international creditor country. The outflow of capital which commenced in an appreciable manner since the inauguration of the new ratio has been strengthened by another cause, viz., the lack of confidence. This flight of capital cannot be considered as a healthy sign indicating the creditor position of the country. How and in what manner this desirable consummation can be achieved has been carefully elaborated in this article. For the present, however, the debtor-creditor relationship on capital account is the outstanding feature. She is a debtor to a large extent while creditor to an incredibly little amount. Significant changes would have to take place, firstly, to reduce the outward capital outflow for interest payments, dividends and repayments of old capital issues and service charges. Secondly, the financial, industrial and business structure should be so altered that their control is being exerted with the single aim of making India a creditor country. While this is being accomplished every effort should be made to minimise the evil effects of economic disturbances. Nothing is more important than a properly organised capital market and money market which would facilitate the outflow of capital after satisfying properly and reasonably all domestic demands for capital.

The building up of such a financial structure is the important task before the country. The immediate problem would be to mobilise small dormant balances lying scattered here and there, satisfy every legitimate domestic demand for capital supply and reduce any further dependence on outside markets for capital funds. For a long time the problem would be similar to that which now

exists in Canada, viz., the streams of outflow and inflow of capital would exist till extraordinary circumstances may give us an opportunity to develop into a mature creditor country. It would take indeed a long time to play the permanent role of a creditor country such as Great Britain, the United States, France, Belgium, Holland, Switzerland and Sweden. This would be conditional on the fact that a steady uninterrupted growth of economic activity leading to surplus savings, when considered from the standpoint of domestic demand exists in the future. At the same time the present and future net debtor position should be restricted and even gradually reduced. A Central Reserve Bank, a national economic policy towards industrial development and improved ability and capacity on the part of Indian nationals to satisfactorily discharge all services which the foreigners are rendering at present are the requisites. When these exist it would be time enough to think of consciously guiding the investment outflow into proper channels so as not to disturb economic peace nor at the same time sacrifice the financial, commercial and industrial advantages flowing out of suitable markets for our capital employment. The Oriental markets undoubtedly offer such a field. But the creation of issuing institutions which will cooperate with and consult those of Great Britain, France and the United States has to be brought about.

The creditor countries of the world are Great Britain, the United States, France, Belgium, Holland, Switzerland and Sweden. The debtor countries of the world are the remaining and India belongs to the debtor group.

<sup>1</sup> The financial world uses this phrase in a very loose manner. If trade balances are in India's favour and the remittances secured by the Secretary of State are smaller the financiers of this country begin to speak of India as a creditor country but in reality there is only a flight of capital from the country. Broadly speaking it ought to be understood in the wider sense of external investment outside India when the profitable opportunities of investment in India have been exhausted. The neglect of home demand and attempt to invest abroad betokens loss of confidence in the stability of home conditions or indicates fear of fiscal pressure. When such things exist there is real flight of capital from the country. India cannot therefore be called a creditor country. It is interpreted in the wider sense of external investment in this article after satisfying the needs of general investment for the economic development of the country.

**The Flight of Capital.**

Since Sir Basil Blackett conjured up the vision of India as an exporter of capital<sup>2</sup> a striking mention of this possibility is always made now and then by well-informed people.<sup>3</sup> A critical and analytical study of this possibility has to be made. Can India practically turn the tables on the world? Can she dramatically shift her position from a debtor country to that of a creditor? If so, how long would India take to accomplish the financial *coup d'état* and become an important factor in international financial relationships? What significant developments would this new role of hers bring about in her organisation of domestic industry, trade, banking and finance? Unless these facts are placed before the enlightened public it would not only be impossible to facilitate this desirable consummation but the process of adjustment will not be facilitated.

**The Absence of Factual Numerical Values.**

Unfortunately this tangled and complex problem cannot be understood for reliable material facts and figures are conspicuous by their absence but their bearing can be properly analysed by the trained scientific processes of judgment. Lack of reliable data, statistical or otherwise, would indeed make the problem a tough one to be comprehended easily by the man in the street. But the fundamental economic and financial factors have been properly arrayed in their true relationship so as to throw light on this intricate problem which would involve new economic tendencies, national policies, central bank management, changed commercial and industrial outlook and an outstanding improvement in the political status of the country.

<sup>2</sup> See his last farewell speech delivered at the Maiden Hotel at Delhi.

<sup>3</sup> See Sir George Schuster's reply to the Annual Meeting of the Federation of the Indian Chamber of Commerce, Delhi, "Foreign liability is decreasing because of the export of capital," February 15, 1930.

**India is a Debtor Country.**

Even though a carefully compiled statistical statement is not available to display the various factors of outward and inward payment,<sup>4</sup> nevertheless it is easy to understand that India is still a debtor country. Granted that there is absence of reliable data and meagre information concerning the balance of payments so far as India is concerned, it is not, however, necessary to know the precise numerical values under each heading to comprehend the broad fundamental fact that India is a creditor country in spite of the huge visible merchandise payments in her favour.

Something can be done to enable the reader to visualise the present position if the following features are borne in mind. Firstly, it is an undeniable fact that foreigners hold real property in this country. From the beginning of the British rule in India in 1857 and even in the days of the historic annals of the Hon'ble the East India Company this vast sub-continent attracted some amount of foreign capital by means of which industrialised agriculture, leather, shipbuilding, railways and other mercantile

<sup>4</sup> Balance of payments Lakhs of Rupees

	1925-26			1926-27		
	Credit	Debit	Balance	Credit	Debit	Balance
Current items						
Merchandise	40859	28849	+12010	33109	29527	+ 3582
Bullion, Specie, etc.	133	3691	- 3538	119	2136	- 2017
Other current items	1059	4707	- 3648	1132	4604	- 3472
Interest and Dividends	451	3350	- 2899	422	3400	- 2978
Total	42502	40597	+ 1905	34782	39662	- 4885
Long-term operations	174	1827	- 1653	4757	919	+ 3838
Short-term operations	-	252	- 252	1047	-	+ 1047
Grand total	42676	42676	-	40586	40586	-

See the Memorandum on Balances of Payments issued by the League of Nations, 1928, pp. 143 to 147. For recent years see the same publication, of the League of Nations, p. 124, 1931 publication, Vol. II, (1927-1931).

projects were readily developed. These investments were made mostly by the Company's servants, free merchants and others. With the gradual development of the country by railways and modern means of communications, opportunities for profitable investment of capital were multiplied and the interest charges (interest, dividends and capital repayment) gradually began to assume high proportion. This main external indebtedness began to increase as settled political conditions stimulated the immigration of capital funds from abroad which were invested in industrialised agriculture or plantation industries, manufacturing commercial and transport enterprises. The services function also involved heavy payments. The economic maladjustment brought about by increased manufactured imports and the decay of the home industries heightened the dependence on foreign capital funds, and secondly, it incapacitated India to develop certain lines which might have tended to counteract or counterbalance the increasing outward payments. The decline of her mercantile marine, the absence of tourist payments, the missionary doles on a large scale and the lack of Indian emigrants' remittances into India restricted her capacity to generate a flow of capital payments into the country, i.e., the inward capital flow under the above headings was hardly an appreciable factor in the situation.

Throughout the second half of the nineteenth and the twentieth century the foreign investments have continued. The excess export of merchandise or commodities was the only significant manner by which the heavy interest payments could be paid on the capital investment item to Great Britain alone. It was not foreign long-term investments alone that continued but short-term capital funds were employed by the foreign exchange bankers in this country. In addition to private borrowings, governmental borrowing gave easy scope to the foreigner to purchase Indian securities. Invisible debits have gone on constantly expanding and thereby causing an outward flow of payments. Interest payments, students' expenditure, foreign immigrants' remittances to their

home, service payment for foreign shipping, banking, insurance and mercantile commissions and payments for reimported securities largely explain the huge visible merchandise balance in favour of India. Both Indian imports and exports are increasing every decade, so also the invisible debits.

Two facts, viz., foreign property investments in land, mining and commercial enterprises and growing invisible debits have been referred to as convincing proofs of the debtor position of our country. The increasing public debt of the country held by external capitalists tells the same tale. Long-term credit advances in the shape of subscriptions to debentures are still being made by the foreigners. The financing of the foreign trade being solely in the hands of the foreign exchange banks, it inevitably leads to the borrowing of short-term advances for financing our foreign trade. The retarded economic growth and absence of widened economic activities and enterprises preclude the accumulation of capital on a large scale which can make India bound ahead as a financial power. Some improvement in this respect has taken place only during the post-war period and this has given scope to the few foreign investments and other property titles now possessed by the present-day Indian capitalists.<sup>5</sup> An increasingly large portion of the sterling indebtedness of the country and the London-enfaced rupee debt of the Government of India is being held by Indian investors more than before.

#### **The First Opportunities.**

The huge capital borrowings of the State and the foreign capitalists' adroit movements in perpetuating their policy of economic development enabled the Indian economists, publicists and politicians to raise the cry "that India's property is being heavily mortgaged to outsiders." Recognising the fact that

<sup>5</sup> An Indian correspondent of the **Economist** of London estimates that about £37,500,000 or Rs. 50,00,00,000 have been invested abroad (see p. 599, October 6, 1928).

“ political swaraj cannot continue to last any long time without financial swaraj ” the Indian nationalists have regarded with disfavour and serious apprehension India's indebtedness to the external capitalists. The rhetorical ability with which they pleaded their cause led to the appointment of the External Capital Committee so as to seek justification for the exclusion of foreign capital and devise remedies to reduce this dependence on outside capital.

While the psychological impulse to make investment abroad was being imparted by the spirited arguments of nationalist economists the real impetus came during the war-time to the Indian capitalists to make their entry into the foreign security markets.<sup>6</sup>

But in the absence of a banking structure making possible foreign investment banking this glorious opportunity was lost. The increased money-income for the different classes though largely counterbalanced by rising prices gave opportunity to gather savings and the investment of the same in industrial undertakings which received a stimulus as a result of the diminished pressure of foreign competition. That a portion of the increased value of money savings is being invested in Brazil in response to the underwriter's activities in the Bombay Money market has given rise to the statement that India can under proper guidance hope to play the part of a creditor country. The actual flow of capital can also be inferred by the country's repurchasing the Indian securities held by the foreign investors. There is a considerable outflow of capital from

<sup>6</sup> The real reasons for external investment of Indian capital were the depreciation of the Government securities, depreciation in the capital value of landed property, the low rate of interest offered as the yield on industrial stocks and shares and the absence of good non-speculative industrial securities. These reasons prompted the Indian capitalists to seek the external investment markets. The appreciation of the rupee exchanges and rupee currency facilitated the outward movement. The exact amount invested cannot be arrived at as there is great secrecy in the matter of investment carried out under the aegis of the Indian banks.



the Indian States since the agitation for representative government became an effective propaganda for securing better rights on the part of the subjects of the Native States. These are broad indications of the fact that some amount of savings is being utilised in making external investments. The real economic test of a creditor country lies in the volume of claims built by it on the rest of the world. A debtor country, on the other hand, possesses claims on the rest of the world which are normally less than its liabilities. When there is no net balance of international payments or a surplus in favour of India it cannot be considered as a creditor country.

### **Can She Become a Creditor Country?**

While the passage of the Indian capital to the foreign investment fields has been facilitated by real increase of money savings, the appreciation of the rupee and banking propaganda there has been no real financial shift from the debtor to the creditor status. If a true picture of the international balance of payments is to be obtained the financial position of India still remains as that of a debtor country. But she has entered a transition stage when the debtor-creditor relationship exists at present. The paucity of statistical information about some of the items precludes any tabular illustration of the material facts. There is no use of estimating the magnitude of each stream for it cannot be done in the absence of reliable statistical data. But the fact of the existence of the two streams is undisputed.

Secondly, the stream of outward capital flow from this country is far less than the stream of inward capital flow into the country arising chiefly out of Governmental indebtedness and the borrowings of corporate undertakings. For purposes of economic study it is indeed the impact of these capital movements that is important rather than the exact volume of the two capital streams or the net balance arising out of the two streams. The character of each stream would, however, be composed of the following features:

The outward flow of Indian capital either for investment purposes or for the payment of interest on old borrowings or pay-

ments of services done by foreigners to India can be arranged under the following headings:

Items	(Lakhs of Rupees)				
	1925-26	1926-27	1927-28	1928-29	1929-30
1. On account of foreign Securities held abroad	1370	500	—	691	—
2. For previous securities repurchased from foreign hands (Transfer of paper from London to India)	200	37	35	439	510
3. Interest payments on Government and Municipal Foreign debt and foreign capital invested in India	3350	3400	3420	3470	3590
4. Payments for services	100	100	120	120	120
5. Posts, telegraphs, etc.	13	9	8	9	9
6. *National tourists spending abroad	450	450	450	450	450
7. Government expenditure abroad	4144	4045	4015	3602	2695
8. Payment on account of amortisation of Government foreign debt	237	382	259	268	200
9. Foreign real estate purchased by Indians	—	—	—	—	—
10. Other Investments	—	—	—	—	—
11. Payment on account of amortisation of other loans raised abroad	—	—	—	—	—
12. Net decrease in floating indebtedness of the Government	252	—	—	—	—
Total ...	9936	8923	8307	9049	5574

\* Net, i.e., after deducting what foreigners spend in this country.

Of the above twelve items, items 1, 2, 8, 9, 10, 11, and 12 are indications of the economic strength of the country. The remaining

items 3 to 7 are payments for capital lent to us in the past or payment for services conducted by foreigners. We have now to consider the flow of foreign capital into India which can be arranged under the following items.

## INFLOW OF FOREIGN CAPITAL INTO INDIA\*

Items	Lakhs of Rupees				
	1925-26	1926-27	1927-28	1928-29	1929-30
1. As interest and dividends received from capital invested abroad—chiefly Government Treasury and reserve balances in London	451	422	276	273	430
2. New Government borrowings	—	—	1003	1336	1603
3. Port Receipts from foreign shipping	200	200	250	250	280
4. Posts, telegraphs	14	21	16	14	14
5. Government receipts from abroad	845	911	843	765	1146
6. Existing Government securities sold abroad	—	3	28	—	—
7. Foreign securities resold abroad	—	4712	744	—	439
8. Securities of Municipalities and local bodies sold abroad	—	—	—	—	—
9. Other foreign capital invested in India	174	42	43	114	—
10. Increasing short-term indebtedness or floating indebtedness of Government	—	1047	2477	1716	—
11. Domestic real estate sold to foreigners	—	—	—	—	—
Total ...	1684	6958	5680	4418	3912

\* Both the above tables are taken from the Memorandum on International Trade and Balance of payments issued by the League of Nations, 1931, and the previous issues.

Whether India can continue to invest capital abroad and be a creditor country depends on several factors which are altogether absent at present in the Indian economic structure. If so, what would be the geographical fields of her investment? Brazil would persistently demand Indian or foreign capital and enterprise for a rapid development of her resources. So do the Dominions of the British Commonwealth. Before this problem can arise the more important domestic field has to be considered. The domestic demand for further industrialisation and for repurchase of Indian securities held abroad would be great.<sup>7</sup> The capital supply being insufficient when compared with the demand the rates of interest would be consequently high. Can Bank credit really aid the community savings to satisfy the total capital supply that is needed for domestic investment demand? It is only after this is satisfied

<sup>7</sup> Sir George Schuster estimates that "the existing external capital can be repaid in the course of a generation." See his Speech before the Federation of the Indian Chamber of Commerce, Delhi, February 15, 1930.

But lacking a reliable estimate of **per capita** income and savings it is not possible to make any guess in the above direction. The most recent estimate is that of the Central Banking Enquiry Committee which states that the **per capita** income of an agriculturist is Rs. 42 per year. The average income of an Indian is established to be Rs. 110 by the Simon Commission. When this figure is compared with the income of other people of other countries it becomes easily apparent that the easy repayment of the whole of the external capital is not an assured proposition.

Name of the country	Total (in mil. dollars) per capita	
Germany (1928)	15,500	\$ 231
Great Britain (1924)	19,400	\$ 435
France (1927)	8,900	\$ 218
Italy (1925)	5,600	\$ 140
Belgium (1926)	1,760	\$ 223
United States (1927)	76,400	\$ 652

Unless the distribution of income is conducive towards fairly heavy concentration in the hands of the moneyed classes this repayment cannot be forthcoming.

that Indians can wisely invest in foreign securities and the foreigners should be willing to pay high rates to develop the habit of foreign investment banking on the part of the Indian capitalists.

#### **How Can Foreign Capital Demands be Satisfied?**

Even granted that the increased money savings exist in the hands of the Indian people the future position as a creditor country can only be maintained if radical changes in the following directions would be forthcoming. Unless these materialise a steady outward stream of capital cannot arise. The large aggregate savings required can necessarily be maintained only out of successful industrial advancement. Most of the capital borrowed will generally be for constructional purposes and foreign loans after all mean employment of the purchasing power granted to the foreign borrower at home alone.<sup>8</sup> It is for this reason that the " earmarking clause " is often inserted in the borrowing agreements. Such sort of industrial advancement has not taken place as yet in India. To count upon the export of raw materials mostly of an unfinished character to satisfy the foreign demand is unwise economic statesmanship. '

Secondly, it requires the full gold standard regime and the real gold base for the credit structure should exist. If a real accumulation of surplus savings funds were to exist the credit structure need not expand unduly to satisfy the requirements of the foreign borrowers. If the Central Bank credit were to be based purely on this understanding, i.e., to enable the nation to lend capital to foreign borrowers for after all it is purchasing power that is required and as bank credit possesses this purchasing power this process should be facilitated.

Thirdly, the Central Banking policy should be to facilitate this movement of capital without any serious disturbance to the

<sup>8</sup> See the Report of the Macmillan Committee, p. 79.

credit structure of the country. The national credit policies should be formulated with a view to achieve this. The use of credit funds in the investment market would lead to a rise in the price of securities and this undoubtedly stimulates the growth of new securities both foreign as well as domestic. The nationally-managed Central Bank can intelligently pursue such a policy and thus add funds to the available savings for investment purposes. Such deliberate promotive policy should be one of the aims of the national economic organisation of this country. The Japanese Government guarantees the paying of a minimum dividend if the investment is made in foreign fields pointed out by itself. Obstructions to the growth of foreign trade should be removed and other measures to facilitate the financing of foreign trade with the help of domestic funds would go a long way in helping this situation.

The future expansion of India as a creditor country depends on the successful inauguration of the above features. Industrial expansion by itself creates, of course, increased money savings but there should be a method in the matter of allowing the outward flow of the capital movement. Without a Central Bank such a policy cannot be inaugurated and successfully pursued.

#### **The Expansion of the Outward Flow of Capital.**

To establish a wider stream of the outward flow of capital than what is taking place at present both positive as well as negative measures would have to be taken. Firstly, the positive measures outlined above would be necessary to have an effective control over the stream of capital efflux and its impact on the domestic structure.

Secondly, the negative measures would have to be directed towards the reduction of the capital repayments that we would have to make in return for old payments of capital to this country. Students' and tourists' remittances can be reduced and payment for service charges can be cut down by Indian nationals undertaking to perform service of an equally efficient character. Unless the general level of intelligence rises and the psychological

confidence in one's own abilities is aroused it is impossible to think of this. The attempt to create a mercantile marine has been much misunderstood. It is by a patient tackling of these services by honest and skilful management that these can be reduced to a lower figure.

### **Possible Geographical Fields.**

With the economic recovery of Europe arising out of the formation of a United States of Europe and the Latin American field set aside as the close preserve of the American financial interests it is not possible to secure easily fertile and unexplored fields. But Central Asia and the vast hinterland of the North-West Asia afford a suitable and congenial field to the Indian capitalists.

But in the immediate foreseeable future the financial position of India would be that of the debtor-creditor country and all attempts should be made to cast off the sloughs of dependence on foreign capital. This is what we have to learn from the study of the Canadian Dominions' financial growth and development.

### **The Problem of the Future.**

The first attempts should be directed towards making the country secure more capital resources from the small savers. Even in America the small savers were mainly responsible for 50 per cent of the investment funds while the remainder came from the rich savers, the banks, the investment houses and foreign investors who have invested in the American field.

Secondly, as these incomes are converted from the small dormant hoards into capital funds even the government borrowings abroad for capital expenditure ought to cease for high money rates are sure to prevail for sometime longer due to the flurry in the American Stock Market. As it would be decidedly postponing an era of necessary expansion and as it would leave domestic capital for domestic ventures the Government borrowings should be carried

on with caution only after a proper study of the rate of interest, the existing facilities for the Indian people to subscribe to them and finally the time at which they can be floated. The Central borrowing authority can arrange these things in consultation with the National Board of Investment or National Savings Association, that would have to be created in the near future, and whose untiring activities alone would be highly successful in the direction of tapping the rupee resources of the small investors for capital purposes. If remittable Sterling Loans at a stabilised rate of exchange were to be floated it would tempt the Indian investors to subscribe to them provided the rate of interest is paid in domestic currency at the nearest Government Treasury or the Imperial Bank's branch to which the Indian investor may have access. The East India Company did have resort to such remittable loans so as to tempt its officers to subscribe to its rupee loans floated in India. Resort to the foreign money market need not necessarily be condemned so long as the return from the use of capital is always higher than the rate of interest paid by the Government. No informal "tying in or earmarking clause" should exist in the case of foreign loans. The whole of the proceeds should be spent on productive purposes, viz., things required for capital undertakings. Unless this method is resorted to the forthcoming political turmoil would frighten even the Indian capitalists and make them remit their fluid capital resources through the banks to more stable countries where political, social and administrative troubles are not likely to arise.

Concurrently with these attempts our efforts should be guided towards reducing the service charges which figure largely in the invisible debits of this country. The starting of a mercantile marine, the financing of our foreign trade with domestic funds, the starting of efficient Indian Insurance companies, mercantile commission houses and the gathering of industrial and engineering knowledge by the Indian students abroad would gradually diminish this stream.



The existing gold resources should be mobilised and allowed to play the part of the base for banking credit. Both gold and central banking credit should be able to stimulate the productive activity thus leading towards increase of commodities and exports from the country. The resulting stream of capital inflow can be properly guided into an outward stream into select geographical areas where commercial, industrial and financial advantages can be easily secured. This movement must be conducted in such a manner which does not lead to conflict with other nations who generally consider such areas as their chosen preserve or "spheres of influence." But this has to be done after all the old capital issues floated by this country in London have been repurchased.

Again, India can continue to borrow for short-term periods and maintain at the same time the long-term capital creditor relation.<sup>9</sup> Individuals, banks, and the Government have to facilitate this onward march of these broad forces and adjust the domestic situation so as to tone down the harmful features of this economic impact of India with foreign nations and international policies. Almost all capitalist creditor countries resort to this method to augment their capital resources. Both England and America are short-term borrowers for several items and they relend these capital resources for long-term purposes.

#### **How Long would it take India to be a Creditor Country?**

While the future course has been outlined it remains for us to consider how long it would take us to reach this destined goal. The United States of America became during the course of one-

<sup>9</sup> See The Report of the Macmillan Committee, p. 112.

See President Hoover's remark that the United States of America is a short-term debtor for roughly 400 million dollars and the free gold has to be retained in the country for discharging its liabilities. Quoted from the Economic Impact of America by Peele—see also the Macmillan Committee Report, para 157, p. 20.

and-half decades an international net creditor country to the extent of dollars 18 billions. Doubtless steps would be taken to perpetuate this stronghold. Such a thing was rendered possible due to international circumstances and the policy of the Federal Reserve Board in facilitating this consummation.<sup>10</sup> It needs no emphasis to state that India cannot hope to achieve this miraculous development within so incredibly short a time as America has done. Our industrial, banking and national unpreparedness would render this impossible. However devoutly wished for, this desirable consummation cannot be achieved with amazing rapidity for the guiding, controlling and protecting political influences do not exist as yet in this country.

#### **The Immediate Issue.**

A widening of the commercial banking reserves by mobilising the gold resources is the first task of the banking system. This would lead to easy money conditions. Central Bank credit can further strengthen this tendency and initiate the outward flow of capital funds and protect the country from any evil influences resulting out of this step on the economic structure of the country. Until then the measures for taxing the intermittent and irregular efforts of the capitalists to make foreign investments cannot succeed. The present-day flight of capital cannot be checked by the method of levying income-tax on their dividend or foreign income. If the raising of revenue be the endeavour then by all means should our efforts be concentrated on taxing the dividends of Indians as well as foreigners, be they domiciled or not. Whether they attempted to bring the return of capital into India or not should not be the guiding consideration. Indian money lying abroad and raising profit for itself ought to be taxed in a way as to be free from the charge of levying double taxation. The

<sup>10</sup> See the International Financial Position of the United States, published by the National Industrial Conference Board, 1929.

economic justice of this contention can be easily recognised. The general economic development of the country is being neglected. The revenue-producing enterprises are being impeded by the lack of necessary capital resources which can be obtained at a low rate of interest. Secondly, they tend to bear the exchange and the maintenance of the stable exchange policy during the days of economic depression becomes very very difficult. The restoration of the market in our gift-edged securities cannot take place so long as the present tendency for the capital to seek foreign investment remains unchecked. Any conversion loan or funding of the considerable portion of floating debt cannot take place.

The mere raising of income-tax on foreign investment does not check this tendency. The really effective means to check the flight of capital are the introduction of the license system and banks tending to encourage the export of capital should seek the permission of the licensing Board of the Finance Department.<sup>11</sup> Differential income-tax rates on the receipt of income from foreign and domestic investments can also be insisted upon. In spite of these or any other checks there would be no effective means to stop the flight of capital. Lord Bradbury rightly says, "No Government has yet succeeded, though many have tried, to prevent capital finding its way to the more attractive market. Measures designed for that purpose are as effective as the fabled enterprise of building a wall round a swallow in order to enjoy the blessings of perpetual spring."<sup>12</sup>

<sup>11</sup> There is systematic control over the companies issuing foreign securities in the United Kingdom.

<sup>12</sup> See the Macmillan Committee Report, p. 278.

# LAND MORTGAGE BANKS—SOME GENERAL CONSIDERATIONS

BY

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## SUMMARY

The preponderance of informed opinion, is in favour of the view, that it is rather dangerous to lend short-term deposit money for long-term purposes, and that mortgage credit requires an organization distinct from that of Cooperative Societies. The various provincial Banking Reports, excepting the Bengal Report, have accepted the need all for a distinct kind of organization for long-term agricultural credit. The Central Banking Committee (majority) have pleaded for a separate set of institutions for long-term agricultural deposits.

The problem of organizing and successfully working land-mortgage Banks, bristles with difficulties. The more important of the questions that arise, when a Provincial Government decides to organize and work land mortgage banks, are thus enumerated in the Report of the Central Banking Enquiry Committee:

- (1) For what purposes, should long-term agricultural credit be granted?
- (2) What should be the maximum period for repayment?
- (3) Should land mortgage Banks be permitted to receive deposits and, if so, for what purposes?
- (4) Should the issue of debentures be by primary or Central Land Mortgage Banks? If it is to be a central agency, should it be by the Cooperative Bank?
- (5) What should be the nature of the assistance granted by the State to such Banks?
- (6) Should they be invested by special legislation, with summary powers?

Now there is bound to be some difference of opinion on the answers given to these questions in the majority report of the Central Banking Enquiry Committee. As regards questions 1 and 4 (which are closely connected) the view of the Central Banking Committee is that, for a long-time to come, land-mortgage banks should be engaged in redeeming landlords, who have been in debt for a long time, and that they should lend for fairly long periods, say 20 or 25 years. The dangers, inherent in a system of long-term lending, are vividly described for us by the Punjab Report: "If the period of repayment is very long, the agriculturist is likely to feel more the burden caused by repayment, than the benefit derived from the loan secured." Further, it is rather dangerous to have a very long period for repayment of debt, because rates of interest fluctuate often.

Provided long-term deposits are forthcoming, there is no reason why land-mortgage banks should be precluded from taking deposits from the public. But the mainstay of mortgage credit finance must be debentures for a long time to come. In spite of certain forms of state help, such as guarantee of interest on the debentures, or subscription of a part of the debentures, by the Provincial Governments, the working of land-mortgage institutions, e.g., the Madras Central Land Mortgage Bank indicates to us, that unless Provincial Governments declare the debentures of Land-mortgage banks as trustee securities, and do not compete with them in the Indian money-market, more or less at the time when debentures are placed on the market, it would be practically impossible for these institutions to obtain the debenture-capital. (Contrast with the state of affairs here the provisions of the British Agricultural Credits Act under which the Treasury has been called upon to contribute £10,000 a year for ten years to the Agricultural Mortgage Corporation.)

In connection with the sale of these debentures, the dictum of the Central Banking Committee, that not "a Provincial Corpora-

tion but also primary land-mortgage banks should be allowed to sell them, and that these primary banks should operate over large areas," is likely to provoke difference of opinion. As land-mortgage banks can be successful only in those rural areas where the capital value of landed property is substantially high, for effective working there ought to be generally a limit of territory, within which they have to work. Further, at least in South India, it seems to me to be necessary that there ought to be some centralization in the matter of grant of loans however inconvenient such centralization might be to borrowers. Further, where there is an ordinary Coöperative Society in existence, its opinion regarding the advancing of a loan to a particular borrower may be profitably obtained, though the responsibility for the ultimate granting of the loan must rest with the land-mortgage bank.

It must be remembered, that the financial difficulty is not the only obstacle to be overcome. The success of a Central Land Mortgage Bank is ultimately dependent on the efficiency of primary land-mortgage banks. A primary land-mortgage bank should be an active agent of the Central Bank in undertaking valuation of property, repaying capacity of borrowers, etc. In case of death of the borrower, subsequent to the loan transaction, primary land-mortgage banks should see that the heirs of the deceased are brought on the books of the bank as debtors and an acknowledgment of indebtedness should be obtained from such heirs.

In the recent Report of the Central Banking Committee, more attention is concentrated on Provincial Land Mortgage Corporations than on primary land-mortgage banks. We wish that in giving effect to the Central Banking Committee's recommendations, the Government also would take care to make detailed provision for the reorganization of primary land-mortgage banks. In organizing a primary land-mortgage bank, care also should be taken to secure share-capital from non-borrowing shareholders to the extent of at least half the capital required by the bank. These non-borrowing shareholders will be useful in working the society

disinterestedly. On the question of the powers of those primary banks, there is difference of opinion amongst the several Provincial Banking Committees. The Central Banking Committee (following the Townshend Committee on Cooperation in Madras) has recommended that the primary societies, like the *Landschafter* in Germany, should be vested with summary powers of foreclosure and sale of the defaulting members' properties. Possible hardships from this state of affairs, according to this committee, would be overcome if only the aggrieved party is given a right to question, in the civil courts, the actions of the bank. Another recommendation, made by this Committee, on which also there is sharp difference of opinion, is that land-mortgage banks should be empowered to take possession of the landed property of defaulting members. The Bihar and Orissa Banking Report has suggested, because of the difficulties of landed-property administration by a large number of scattered primary banks, virtually the creation of a State Land Bank with which Land Revenue officials would cooperate and assist in the valuation of the security offered by borrowers.

Mr. Mann Subedar's proposals (Minority Report) need not be viewed as a cut and dry solution of the problem of agricultural indebtedness. They are made because Cooperative Land Mortgage Banks which have been prescribed as a panacea for long-term debt in many parts of British India suffer from serious defects, partly because of their very inherent constitution. Mr. Subedar recommends, that a department should be instituted in the Reserve Bank of India, whose functions would be (1) to appraise the requirements of long-term credit, and to put forward land mortgage to the required amount; (2) to make arrangements for the sale of these lands, and to deal with all agents, whether cooperative banks, or commercial banks, through whom the scheme is to be worked. He is against the whole idea of land-mortgage banks organized on a Cooperative or quasi-Cooperative basis. A number of criticisms, can be levelled against his proposals. In

order to work his scheme, various alterations would have to be made in the Revenue Code or the Record of Rights. Further, the case for having an independent organization, for liquidating long-term indebtedness, as has been already pointed out, is overwhelmingly strong. It is unlikely that a Reserve Bank for India, when established, would also satisfactorily liquidate long-term indebtedness, which is a stupendous problem in British India.

There may be certain provinces, like Bengal, where there may not be enough work to start with for land-mortgage banks. In that case those in charge of Central Cooperative Banks, and those in charge of Joint Stock Banks, may be entrusted with this task. But this state of affairs must be temporary only.

#### **Conclusion.**

Very often we are forced to submit to the feeling that the institution of land-mortgage banks alone cannot eradicate the evil of long-term indebtedness, sometimes dating to twenty or twenty-five years earlier. There is a good case for the appointment of Debt-Commissioners, who would have to go into the details of loan-transactions, estimate the total amount, paid by way of interest alone, to creditors, and adjust the debt-burden in view of the fall in prices. In the case of very small loans, as is pointed out by the Royal Commission on Agriculture, there is a strong case for a simple Rural Insolvency Act. We must recognize that people can carry only a certain amount of load and if they attempt to carry on their shoulders an unreasonably heavy load of debt they would nearly perish in that task.



# THE LABOURERS AND THE PROBLEM OF THE STANDARD OF LIVING IN INDIA

BY

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The problem of the standard of living and its effects on the industrial efficiency of the labourers is such an intricate one that it would require some forethought in order to realise its complexity. As Patrick Giddes remarks: "Our progress is yet quantitative, not qualitative. Remedial treatment demands a raising of the whole character. Only thus can we ever hope to realise the aim of practical economics, which is not illusory progress visible only in Bank ledgers, but is the progressive development of the highest human and social life not the increase of wealth but the ascent of man." If the last sentence of this remarkable passage were modified into "not only the increase of wealth but also the ascent of man,"<sup>1</sup> it would be acceptable to those as well who, in spite of all, still maintain that wealth, material wealth, is the basis of real progress. As Economists, we can never underestimate the importance of material prosperity, on which ultimately is laid the foundation of culture and civilization; and, as all of us would agree, a decent standard of living is an impossibility without sufficient material wealth.

The problem now before us is to find out means and methods whereby the standard of living of the Indian people including the labouring classes could be raised and thus directly and indirectly to solve the great problem of labour unemployment.

With the rest of the world, though to a much greater extent and intensity, India shares the scourge of unemployment and

<sup>1</sup> Patrick Giddes, *The Conditions of Progress of the Capitalist and the Labourer.*

under-employment. This curse of Indian Economic life can best be removed by raising the standard of living, which (in the words of Alfred Marshall) "implies an increase of intelligence and energy and self-respect, leading to more care and judgment in expenditure, and to an avoidance of food and drink that gratify the appetite but afford no strength, and of ways of living that are unwholesome physically and morally."<sup>2</sup> This eminent social scientist does not preach crude simplicity: but, on the contrary, he is in favour of comfort though not of luxury. Says he, "A rise in the standard of comfort does to some extent involve a rise in the standard of life, a rise in the standard of life for the whole population will much increase the national dividend." As we all know a general rise in the real income of the Indian people will necessarily mean more consumption: more consumption would mean more production, necessitating provision for more work. More work would denote not only less unemployment but also still more consumption. This would lead to yet more production which in its turn would engage more workers. Thus the virtuous cycle of events would continue *ad infinitum*; provided, of course, the natural drift of events is not stopped by the disgusting mania of hoarding and saving!

Indians, before they ever hope to attain real prosperity, must follow the excellent maxim of "Live and let live." The vast number of would be labourers, belonging to the endless army of the proletariats, living a life of the utmost misery and discomfort, would be relieved of their acute economic distress, if we could only learn to spend more, to consume more and to live better. Thus, by raising our own standard of living, we will be giving others, many hundreds and thousands of them, not only a chance of earning their own livelihood, but which is of supreme importance, an opportunity of leading a decent human life.

<sup>2</sup> Principles of Economics, Macmillan, 1891, p. 738.

Most of us are probably well aware that our industries, especially those which are in the possession of Indians, are hopelessly handicapped by the inability of finding an internal market. In comparison to the extent of our country and its huge population the volume of our trade is much too small. Whatever the other causes may be, one of the primary causes is that we consume less than we could, lesser even than we should. This is obviously due to our pseudo-religious and pseudo-ethical conception of frugality which in its extreme form only helps to keep down the standard of living. Even those who have many chances of bettering their economic condition by spending what they or their forefathers have accumulated, live a life of physical discomfort—but do not spend. India does not spend rationally: it either wastes or hoards! The evil habit of hoarding, accumulating, and piling up wealth has seized large sections of our nation. The innumerable Seths, Saho-kars, Mahajans, and even members of the land-owing community, deliberately lead a life of degenerate asceticism; and either owing to miserliness or a false notion of contentment check the progress of our country. The pitiable condition of our labourers and the great extent of unemployment are also due to under-consumption.

If we had only wished we could have lived much better, and living thus we could have given others better chances of earning their livelihood. And this is the queerest psychological characteristic found throughout the length and breadth of India: indifference towards the satisfaction of needs. It is the curse of India's economic life, to which our labourers are also addicted. Any number of instances could be cited to prove that the Indian labourer instead of working for more wages idles away his time if perchance he has happened to earn in two days what he generally earns in three. Discontent is an absolute necessity for a gradual and permanent rise in the industrial and economic world, without which all energies are wasted and progress comes to a standstill. It is precisely this stagnation which leads to the depths of decay and degeneration. Lack of initiative, spirit, hope, cheerfulness, and

the will-to-succeed are the patent characteristics of the decadent labourer. A certain amount of discontentedness of mind in the working classes is required for safeguarding a real and continual progress, rightly named by Western thinkers as "Divine Discontentment."

As in numerous other ways, especially in matters of spending, India is a land of extremes. One mostly sees either spendthrifts or acute misers. The number of persons who live up to the standard of their income, is very small. Smaller still is the number of such persons, who spend rationally! What we thus need is not so much a better organization of the means of production, i.e., mainly our industries and agriculture; as a widespread propaganda in favour of a better standard of living, which, of itself implies more consumption.

#### **The Standard of Living of Our Labourers.**

The standard of living of our labourers is governed primarily by their average income, which is dependent on the efficiency of their work. Whatever their average income may be it is an admitted fact that there is "a large parasitic class preying on the worker. Heavy toll is taken of his wages by the moneylender, the jobber, or the labour supplier, the foreman and the liquor-seller, with more recently the 'Bucket shopkeeper.' At almost every stage the wage-earner is mulcted of some fraction of his wage. This leads to the conclusion that the immediate problem of the Indian Industry is not so much the raising of wages, for there are many signs that the industry cannot bear higher charges, as the extraction of higher service for the wages paid and securing to the worker a better return for the wages which he is supposed to receive." Thus as long as the efficiency of the labour is, and remains, low<sup>3</sup> there is no hope and no justification for

<sup>3</sup> Speaking of the Labourers in the different mines P. Banerjee observes, "The labour material is very unformed, possesses little skill, and requires constant observation." (Indian Economics, Macmillan, p. 97.)

higher wages. Simply because as it is our industries have to fight against foreign competition and, without substantial aid and protection by the Indian Government have to face extraordinary difficulties, they cannot be expected to be still further handicapped by an increase in the real wages of the labourers, so long as they do not increase their efficiency.

Thus the problem which confronts us is to find out ways and methods leading to the efficiency of Indian labourers. It is not only what a labourer does not earn and thus fails to secure but the way he spends what he earns that affects his efficiency. In other words, it is this attitude of his mind as conditioned by his social heritage towards his individual and social life which mars his capacity for efficient output. Then it is clear that the money spent on useless ceremonies, vain display, and idle or harmful habits has not the same reproductive value as the expenditure in self-education, children's education, sanitation, better clothing, housing and feeding. The efficiency of the labourer does not depend on his personal merits such as ability but also on his general standard of living. And a rise in the general standard of living is only possible when the income is appropriately and proportionately spent on the satisfaction of different human needs. Only when our absolute necessities are satisfied and after we have been able to meet the demands of cultural life such as education, only then we may, in case we can afford it, spend on luxuries. Thus, in other words, a proportionate spending on absolute and cultural necessities should precede an expenditure on luxuries and the expenditure on luxuries to be made only in case there is enough money to spare. And this is exactly what our labourers frequently forget. Both the poor amount they earn and the way the labourers spend their money retard their progress and tell very heavily on their efficiency. It is a matter of common knowledge that our labourers have been taking to drinks and stimulants at the cost of food and nourishment. It is of commonplace observation that from the very day there is a decrease in the quantity or

the quality of food consumed by the labourer, and indifference shown towards the life-promoting and healthy surroundings, there will be a marked decrease in his efficiency. The more he takes to stimulants, the less will be his efficiency.

Thus, in order to raise the industrial efficiency it is our foremost duty to check the growth of alcoholism. Compared to Western countries the quantity of alcohol consumed in India does not seem very alarming but when the bad quality of indigenous alcohol as consumed by the labourers and their very low wages are taken into consideration the comparison does not stand very favourable. Bad distribution in different items of expenditure, wastage on social functions, disproportionate expenditure on stimulants are the chief characteristics of the standard of living of our labourers. And this explains also the low standard of our industrial efficiency.

In the end in order to avoid misunderstandings I wish to remark that it is not my intention to justify the miserable wages paid to Indian workers, neither do I wish to assert that improvement in the conditions of the labourers should or could not be the aim and object of the employers. Far from this I consider that it is a duty of every employer to look after the welfare and material prosperity of his labourers. To what I wish to direct your attention and what I seriously think to be a possibility is the mere fact that in spite of all there are many chances for the labourers to improve their condition, primarily by raising their standard of living, i.e., chiefly by a more rationalised system of expenditure.

Thus the conclusion at which we arrive is that so long as there is no appreciable rise in the standard of living of the labourers, there is no great hope of our country ever attaining industrial supremacy we are so fondly striving to achieve and which could eventually be realised especially in view of the fact that once in bygone days India did attain the supremacy of the world in Industry and Agriculture. She was then the envy of other nations and the admiration of the world.

# FOOD AND FOOD REQUIREMENTS OF THE INDIAN LABOURERS

BY

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It has been observed that differences of climate affect the food requirements of workers. Maurel estimates that the number of calories necessary for a male adult weighing 55 kilograms and performing light work varies from 1,650 in hot seasons in warm regions to 2,750 in cold seasons in cold regions.<sup>1</sup> Work has been done in India and Japan on the basis of 2,000 calories as compared with 5,000 which was the British War ration, and 3,300 which is estimated to be the average requirement of a Britisher engaged in sedentary pursuits.

Much depends also upon the general standard of physical measurement. The food requirement of an average American is based, for instance, on the average body weight of 70 kilograms (154 pounds). In India we have to base our calculations on a different average weight. The weight of an Indian has been found among different tribes and communities to be less than 10 to 20 per cent of the standard weight of a European. Professor Morimoto estimates that a Japanese may be fairly expected to consume only 80 per cent of what a foreigner needs, for the average weight of a Japanese is only 13 kwan, 830 momme, to the European's 17 kwan, 20 momme.

In dietaries nitrogen has a position of its own. We must daily take in a certain minimum quantity of the element but opinions have differed as to the exact amount of this minimum.

<sup>1</sup> Proceedings of the World Population Conference, p. 93.

It now appears that the minimum is not so much of nitrogen itself as of particular amino-acids of which it forms an essential part. The apparent minimum will thus vary according to the type of protein ingested and we could make it smallest by becoming cannibals!

Nitrogenous foods next are heating to the body and, on account of this, people who live in the colder climates are accustomed to take more nitrogenous food than those in the tropics. Thus it comes about that custom gives Indian diets much less nitrogen than the European—from 50 per cent to 70 per cent less. More vegetable proteins are consumed in India than in the West. Speaking about vegetable proteins Dr. S. Wright observes that though these are rather less effective as body-builders, there are marked exceptions: "The mixed proteins of wheat or maize as found in flour or meal will maintain nitrogenous equilibrium at a fairly low level, particularly if whole grain is used and if it be supplemented by small quantities of other proteins such as those of milk."

#### COMPARISON OF FOOD CONSUMPTION

	Grams of protein per man per day.	Calories from all sources.
1. Standard requirement for men at moderate work in the Western countries (At water) ...	125	3,500
2. For hard work ...	150	4,500
3. British War Ration ...	175	4,855
4. Average man (Royal Society Food War Committee) ...	100	3,390
5. Fourteen families in York (wages under 26s) Rowntree ...	89	2,685
6. Twelve labourers' families in New York (Wilson) ...	101	2,905
7. For light work in Japan (Oshima)	100	3,000



	Grams of protein per man per day.	Calories from all sources.
8. For hand work (Jinrikshaman)		
(Oshima)                   ...     ...	158	... 5,050
9. Twenty middle class families in		
Shantung (Adolph)           ...     ...	111	... 3,355
10. Artisan Family in Bengal       ...     ...	40	... 2,283
11. Bengal prison diet (McCay)     ...     ...	93	... 3,500
12. Standard Military ration in Baroda		
(Mrs. Strong)               ...     ...	86	... 2,400
13. Standard army ration in Baroda for		
followers                   ...     ...	86	... 2,077
14. For muscular agricultural work in		
the United Provinces           ...     ...	100	... 2,400

Chittenden's figures of the nitrogen metabolized per kilogram of body-weight may be compared with Volt's, McCay's and Oshima's figures as follows: To these have been added figures obtained at the Physiological Laboratory, Lucknow University.

Bengalees and Ooriyas (rice diet largely)	·116—·120
Chittenden	·120—·130
Biharis and Eastern Bengalees	·140—·160
Japanese, poor classes	·177
Nepalese	·180—·250
Sikkim Bhutias	·250
Average European	·270
Tibetan and Bhutan Bhutias	·350
Nepalese Bhutias	·420 <sup>2</sup>
Average European in India	·224 (McCay)
United Provinces peasant	·092
,,           ,,     middle class	·140
,,           ,,     factory hand	·100

<sup>2</sup> Castellani and Chalmers, Manual of Tropical Medicine, p. 100.

Since the investigations of Chittenden and Hindhead the conviction gained ground that the number of calories which had formerly been considered necessary for a good working diet was much too high. Above all, the quantity of proteins could be reduced to almost half that which was formerly considered indispensable. In Germany it has been estimated during the last War that the population was over-eating to the extent of 59.7 per cent calories and 44 per cent protein. When rations in all the armies had to be restricted the suggestions of physiologists were carried out in practice especially among the Germans whose offensive power and resistance were not affected thereby.

Burridge finds from a recent survey of the peasant's diet in the United Provinces that it gave its caloric energy as 2,400 and allowing for 10 per cent waste, as 2,160 as against 3,500 for a British workman of 67 kilogram weight working 8 to 9 hours per day, but the latter diet would not be suited for work in the Indian sun as is that of the Indian coolie who is very much in the dietetic position that the non-fighting German population were during the War. He observes: "It is evident then that whenever it is easily possible for heat production to outstrip heat loss, work can be more sanely and economically done at the expense of fats and carbo-hydrates and the low nitrogen value of Indian diets has probably been determined through this factor. It may be that the virile race develops in a particular country because its climate makes a high nitrogenous exchange possible. The Indian ryot according to European standard has a low level of nutrition which may cause fatalism but may fit him better for his actual task."<sup>3</sup> It was found out long ago that the basal metabolism of humans, (i.e., the heat production of the normal individual lying comfortably at rest about 12 to 15 hours after the meal) is lower in the tropical or sub-tropical regions.<sup>4</sup> Metabolism studies in

<sup>3</sup> Royal Commission on Agriculture, Vol. I, Part I, Evidence, p. 157.

<sup>4</sup> For a Summary of Metabolism Studies on Indians, see Mason and Benedict, *Indian Journal of Medical Research*, XIX, 1931.

Brazil, Jamaica, the Philippines and Australia have indicated clearly the influence of climate, temperature and humidity in establishing the level of vital activity. The basal metabolism is also influenced by the nature of the food consumed. In a warm country like India an appreciably low metabolism is accompanied by a low level of protein consumption or protein assimilation. There is established in fact a reciprocal adaptation of region, race and food, of metabolism, work and food intake or absorption.<sup>5</sup> Metabolism investigations were started for the Indians in 1926 by H. N. Mukerjee in Calcutta.<sup>6</sup> The Bengalee metabolism was found by him on the average 9 per cent below the Western standards.

A detailed investigation at the physiological laboratory, Lucknow University, of the basal metabolism of peasants in the United Provinces showed that the number of calories needed was about 1,200. This estimate has been reached by measurements carried out by the British Benedict metabolism apparatus.<sup>7</sup> The average basal metabolism has been found to be 6.9 per cent below the English and American standards. A similar investigation in South India showed that the basal metabolism of women was 11 to 13 per cent below Western standards. If we add 7 per cent to these results, we obtain—16 per cent as the approximate basal metabolic rate of South Indian male workers. Sokhey found the metabolism of male medical students in Bombay averaging 12 per cent below the Western standards. Similarly, in a later investigation Mukerjee and Gupta found that the metabolism of healthy Bengali men from 20 to 29 years of age averaged 13.3 per cent below the Western standards.<sup>8</sup>

<sup>5</sup> Mukerjee, *Regional Sociology*, pp. 59-60.

<sup>6</sup> *Calcutta Medical Journal*, XX, p. 425.

<sup>7</sup> N. D. Banerji, *Indian Journal of Medical Research*, XIX, 229, 1931.

<sup>8</sup> Mukerjee and Gupta, *Indian Journal of Medical Research*, XVIII, 1931.

It has also been discovered that high temperature and especially high humidity of the atmosphere lowers the basal metabolism. In the West it has been long known that the basal metabolism is higher in winter than in summer. In India, however, humidity is even more important than a high temperature in reducing the metabolic rate. Thus, in weeks of high temperature and high humidity work in the Indian factories as anywhere else, is bound to slacken and the reduction of industrial output has a definite correlation with the lowering of the metabolic rate of the labourers.

Climatic factors such as temperature and humidity, racial factors such as the size, weight and configuration of the body as well as the amount of protein intake or protein absorption all influence the level of vital activity of a people. Further, the basal metabolism rises and falls according to the seasons in the same region. When the worker is very low from the metabolic point of view, there are not merely lassitude, idleness and lack of zest but the predisposition to disease also actually increases. These facts clearly indicate that the distribution of hours in a factory work should be carefully regulated in some measure according to the variations of the metabolic rate of the workers through the seasons. High atmospheric temperature coupled with a high degree of humidity, which are probably the most significant factors in reducing the basal metabolic rate of the Indian workers, should be avoided as far as practicable for long periods of strenuous industrial operations in the plains of India. Hours of work must necessarily differ according to climates, dietaries and metabolic rates.

A survey has been undertaken of the grades of workers in Cawnpore and their dietaries and caloric energies tabulated as follows:

- I. A working class family of the lowest grade.—Income Rs. 12 per mensem. The family consists of the worker and his wife and two children, aged eight and six,

Consumption per week			Quantity	Calories
1.	A mixture of wheat, gram and barley (in the proportion of 2:1:1) ...		14 srs.	34,943.1
2.	Arhar dal ...	...	2 srs. 10 ch.	5,672.0
3.	Vegetables ...	...	$\frac{1}{2}$ sr.	315.6
4.	Gur ...	...	$3\frac{1}{2}$ ch.	401.8
5.	Meat* ...	...	$\frac{1}{2}$ sr.	1,006.4
				<hr/> 42,338.9

Calories per adult worker per day—2,341.

\* Meat is consumed however only for one or two days in a month. A meat week's diet is taken here. For ordinary days the diet yields 2,393 calories, with vegetables (which are a substitute for meat and dal) the diet yields 2,077 calories.

II. A working class family of the middle grade—Income Rs. 25 per mensem. The family consists of a single adult worker.

Consumption per week			Quantity	Calories
1.	Wheat flour	...	5 srs. 4 ch.	13,041.7
2.	Rice	...	14 ch.	2,916.2
3.	Arhar dal	...	14 ch.	2,289.0
4.	Vegetables	...	4 ch.	158.3
5.	Ghee	...	7 ch.	3,142.0
6.	Oil	...	$\frac{1}{2}$ ch.	112.2
7.	Milk	...	$3\frac{1}{2}$ srs.	2,226.0
8.	Salt	...	...	...
				<hr/> 23,885.4

Calories per adult worker per day—3,412.

III. A working class family of the highest grade.—Income Rs. 40 per mensem. The family consists of the worker and his wife and three children aged nine, three and a half, and one,

	Consumption per week	Quantity	Calories
1. Wheat flour ...	... 14 srs.	...	34,739·6
2. Rice ...	... 3½ srs.	...	11,663·8
3. Arhar dal ...	... 2½ srs.	...	11,629·0
4. Ghee ...	...	7 ch.	3,141·6
5. Oil ...	...	1 ch.	448·8
6. Meat ...	...	12 ch.	1,509·6
7. Vegetables ...	... 1 sr.	...	631·2
8. Salt ...	...	...	

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 59,763·6

Calories per adult worker per day—3,448.

IV. A working class family of lower middle grade.—Income Rs. 18 per mensem. The family consists of the worker, his wife and two children aged seven and one and a half.

	Consumption per week	Quantity	Calories
1. Wheat flour ...	... 7 srs.	...	17,389·4
2. Rice ...	... 3½ srs.	...	11,664·8
3. Arhar dal ...	... 1 sr. 14 ch.	...	3,815·0
4. Meat ...	...	6 ch.	754·8
5. Vegetables ...	...	6 ch.	237·4
6. Ghee ...	...	5¼ ch.	2,356·9
7. Oil ...	...	1 ch.	224·4
8. Salt ...	...	7 ch.	

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 36,442·7

Calories per adult worker per day—2,314

V. A working class family of middle grade.—Income Rs. 27 per mensem. The family consists of the worker, his wife and three children aged twelve, ten and two.

Consumption per week				Quantity		Calories	
1.	Wheat-gram-barley flour			10 srs.	8 ch.	...	26,222·7
2.	Arhar dal	...	...	5 srs.	4 ch.	...	11,445·0
3.	Rice	...	...	5 srs.	4 ch.	...	17,497·2
4.	Vegetables	...	...		12 ch.	...	475·0
5.	Meat	...	...		12 ch.	...	1,509·6
6.	Ghee	...	...		5½ ch.	...	2,356·9
7.	Oil	...	...		2 ch.	...	448·8
8.	Gur	...	...		7 ch.	...	803·6
9.	Salt	...	...		10½ ch.		
							60,758·8

Calories per adult worker per day—2,993

It is striking that the Indian worker in the factory not merely requires but also obtains more calories than are needed by the Indian peasant or a professional man engaged in sedentary pursuit. Thus the calories per adult worker of the lowest grade (2,341) are much higher than the estimate of calories needed for a professional worker or a peasant calculated on the basis of a study of the latter's basal metabolism. On the other hand, the calories which the Indian working man's diet yields hardly reach the level at which the British working man's dietetic position ordinarily stands. The following comparison is significant.

	Basal Metabolism	
	Calories	Diet
British working man	... 1,700	... 3,500
Indian working man	... 1,200	... 2,400

The former has surplus of 1,800 calories to expend on bodily movement (including his work) while the latter has 1,200 calories only. It is usual to deduct 10 per cent from the theoretical caloric value of a mixed diet to allow for the loss due to non-assimilation, which is more marked on a vegetable than on an animal

diet. Thus the caloric value of the Indian workingman's diet comes to 2,160 calories. The surplus available to the Indian labourer in excess of resting requirements is accordingly reduced to 960 calories as compared with the British labourer's 1,800 calories. A part of this difference is accounted for by lower weight, but the difference indicates not merely less stamina and more apathy but also less strenuous work, which may be forthcoming. For moderate work 700—1,100 calories, and for heavy work 1,100—2,000 calories in excess of resting requirements has been estimated by the Food Committee of the Royal Society to be indispensable on account of the increase of metabolism.

It has also been found that the expenditure of calories increases thrice when the rate of working is doubled. Both climate and physiological adjustment have fitted the Indian factory hand to work at a slower pace, and if he has to labour unremittingly and strenuously for long hours he adjusts himself by occasional idleness as well as absenteeism. There is no doubt that work under factory conditions both in India and in England demands strenuous expenditure of energy and its recoupment. It is true that the warmth of the climate does not require heat production to offset heat loss as in the Western countries but, on the whole, the pressure of unremitting work in standardised production in the factories can only be maintained for long and successfully on a diet which is physiologically more nutritive. This is responsible not to a small extent not merely for industrial inefficiency, but also for greater absenteeism and prevalence of disease and mortality among the factory workers in our country. Finally, it is found that the Indian worker has probably a greater degree of relaxation during rest than has the Western worker. This has been attributed to the latter's nervous tension on account of which he finds complete repose only during sleep.<sup>9</sup> If this be so, the distribution

<sup>9</sup> Mason and Benedict, *Indian Journal of Medical Research*, July 1931.



of rest pauses between intervals of work in factories will increase industrial efficiency and output in larger measure than is expected in the West. The basal metabolism which we measure at the physiological laboratory thus might be of great aid to the economist and the factory manager in determining the hours of labour and intervals of rest for the maximum industrial output. Similarly, the results of investigations of the specific effects of nitrogenous foods on hard work may contribute materially to the increase of industrial efficiency. The cooperation of physiology, psychology and economics is essential in order that we can analyse and control all the factors which govern both the speed and volume of production in a country. It is indeed imperative that man's labour and repose should be regulated by the methods of science so as to ensure at once the maximum output and well-being, and recent advances in our knowledge of vital activity and nutrition clearly indicate that such regulation would differ according to region and race.

# LABOUR TURNOVER AND PRODUCTIVE COSTS

BY

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## I

The subject of wages may be regarded from two different points of view :

- (a) As a means of livelihood for the workers in a factory ;
- (b) As an item in productive expenses or cost.

Owing to the keen competition prevailing among the rivals in industry, industrial magnates are driven to the necessity of finding ways and means for reducing the productive expenses. The science of costing and its application to industry has rendered possible an analysis of the different elements determining the supply price of a commodity to be placed on the market. Till a few decades ago, the obvious and possibly the only workable method of effecting a reduction in the cost of output was considered to lie in the direction of reducing the rates of wages. The growth of labour organisations and the consequent insistence on a minimum wage has made it necessary to think out a solution such that a reasonable standard of wages is maintained with a maximum output. Thanks to F. W. Taylor and the evolution of the new science of Management, attempts are made to successfully reduce productive costs without reducing the rates of wages. The human factor in production is being emphasised and with it, problems of labour are attracting increased attention all over the world. I propose to deal in this paper with the problem of labour turnover in its relation to productive costs. A large turnover cumulatively costs an

industrialist a hundredfold more than that of the Strike as productive efficiency is hindered in several ways. Unlike the Strike, however, it automatically yields no hope of industrial or social gain, in better standards of wages or of living or of broadened purchasing power. Only by its elimination can its constructive possibilities be realised.

## II

The definition of labour turnover as adopted by an association in America may be noticed at the very outset. "Turnover is the change in personnel brought about by hiring and termination of employment." An extract from a business journal in America is given below as it gives a very graphic description of turnover.

"If you would know at first hand the big weak spot in our American manufacturing system, throw away the current newspaper editorials on the Menace of the unrestrained labour strike, and set your alarm-clock at 5-30 a.m. It is worth an early start; for you are on the track of an economic wastage so colossal as to match its hundred dollars of annual loss to every ten dimes of financial injury wrung as the toll of the industrial dead lock.

In the chill of the gray dawn, dressed in the oldest clothing you can muster, turn your face from your familiar haunts in the office section of the city, and make your way toward the ranks of tall chimneys guarding the outskirts of the town.

Slip quickly by the silent bulk of dead factory, union-picketed without and police-sentried within, which is featured in the morning's headlines; for your errand is not to the plant-breeding from industrial surgery by men as of the striker's axe but to one whose line-shafting is seldom idle, and whose doors have been

untroubled for twenty years by the shadow of a Walking Delegate.

You are in search of what is ordinarily reckoned the most commonplace and normal of all the daily sights in any manufacturing community—a nondescript group of job-hunters, tailing down the block from a factory employment office's closed door. Nevertheless as you take your place in line, and stand elbow to elbow with them in the keen air of sunrise, you have become a unit in a national menace to the employer, to labour and to society at large."

Turnover refers to the total number of labourers employed in an industrial factory during a given period for taking the place of the employees who for one reason or another have severed their connections with the factory. Unlike the typical handicraftsman of the Middle Ages who pursued the same trade all his life in the same town, the Industrial Revolution has increased the mobility of labour in different ways. The workmen leave one plant to enter another plant in the same industry or one in a totally different industry. The modern wage relation is becoming transitory and the occupancy of a particular position is tending to become temporary. To maintain an average labour force of say 1,000 labourers, it may be often necessary to hire 2,000 or 3,000 during a year to fill the vacant places that may arise or to replace those that leave the jobs. This excess of hired men, viz., 1,000 or 2,000 labourers over what would have been needed, had original employees stayed through the year is reckoned as a turnover of labour. This is expressed in terms of percentages calculated either with reference to the number of employees working at the end of the year or to the average number employed during a year, allowance being made for the natural growth or decay of any industry during a given period. Time and space do not permit me to go into all the aspects of this complicated question with the aid of statistical illustrations, viz., the nature and extent of labour turnover in different

countries, the discussion of the formula employed for computing labour turnover, the more relevant and interesting questions relating to the classification of causes for these "Labour Separations" (personal, social and industrial causes) and the methods that are employed by countries in the West for successfully reducing the huge amount of labour turnover. Therefore I shall content myself with a consideration of the relation this question bears to productive costs of a modern industry.

### III

In dealing with the subject of Industrial costs, it may be said that, generally speaking, expenditure on wages and salaries is one of the most important items that enter into the expenses of an industry. The total or gross cost is usually analysed into (1) Prime or Flat Cost, and (2) Oncost. That part of general oncost which relates to the Works in hand is to be distinguished from Office Oncost or Administrative expenses. Prime Cost and Works Oncost together constitute Works cost. Prime cost is usually composed of expenditure on productive or direct labour charges, cost of materials issued and other chargeable expenses. Items such as factory rent, depreciation, repairs and maintenance of plant, machinery and loose tools, etc., are included under Works Oncost, Office Oncost being made up of expenditure on administration including items like salaries of office staff, printing, stationery, advertising and postage. Without going further into the details of calculating industrial costs, it is sufficient to state that sample analyses of productive costs usually indicate that the rise in labour costs constitute a large portion in the increasing supply prices of commodities placed on markets.

The average manufacturing charges per spindle per day and per loom per day for a limited number of mills in Bombay and other up-country mills are given below. These figures are taken from the Report of the Indian Tariff Board and a distinc-

tion is made therein between manufacturing and overhead charges.<sup>4</sup> The total manufacturing charges are:

		Bombay mills	Up-country mills
Total manufacturing charges per			
spindle per day	...	8.46 pies	7.77 pies
Total manufacturing charges per			
loom per day	...	453.77 pies	400.29 pies

(Total Manufacturing Charges are made up of the following items of expenditure:—Fuel and power: Repairs and upkeep of machinery: Stores: Wages.)

Of the total costs given above, labour costs alone amount to 5.04 pies and 3.86 pies per spindle and 317.64 and 255.50 pies per loom in Bombay and up-country centres respectively. Though Bombay is at an advantage in respect of the direct costs like expenditure on fuel, power, stores, etc., the millowners in Bombay suffer from a serious disadvantage over the mills elsewhere in respect of their heavy labour costs.

Attempts are made everywhere to reduce this heavy costs of labour by finding ways for making the labourer yield a higher return. In the language of the Balfour Committee on Industry and Trade, the central wages problem at the present time is “to combine the maintenance of a reasonable standard of weekly earnings with a maximum output obtainable at a given wages cost.” Fewer men are employed for a given quantity of production, the operatives being asked to produce more, if they are desirous of substantially raising their standards of life. This brings along with it certain inevitable evils, increased unemployment and loud protests from labour organisations being some of the prominent ones.

<sup>4</sup> Report of the Indian Tariff Board (Cotton Textile Industry Enquiry, 1927, Tables, LXXI and LXXII, p. 120.

Alternative methods for economising productive costs without the conjoint ills referred to above are suggesting themselves to leaders of industry in industrially advanced places like America and countries in Europe. A reduction of labour turnover is a subject which has begun to attract wide attention during the last few years. The managers of factories have come to realise that an unnecessary change in the personnel of a given establishment is beset with serious difficulties. The industrial inefficiency and the social troubles resulting from this bad industrial practice of taking in new men by sending away the old, sometimes taking advantage of the needs of the under-selling workers in a glutted market, are being recognised. Such inefficiency is bound to react on productive costs. Apparently cheap labour becomes ultimately costlier.

Though the exact extent of labour turnover cannot be definitely ascertained for lack of complete statistical evidence, the information available is considered enough to emphasise the magnitude of the problem. Gordon S. Watkins in his instructive and interesting work on Labour Problems has indicated how in the United States of America a turnover of 300 per cent was considered normal for many enterprises.<sup>2</sup> It is interesting to notice that even in a company like the Ford Motor Company managed by one who claims to have so systematised the art of production as to effect economies in productive costs on most up-to-date methods, 54,000 labourers had been hired during the year 1912-13 just to maintain an average working force of 13,000 yielding a labour turnover of nearly 400 per cent. It is further instructive to notice how in the next year the Ford Motor Company hired only 7,000 labourers afresh to keep up an average working force of 17,000, the extra 4,000 being required to build up the permanent force for increased activities. The turnover was thus reduced from over 400 per cent

<sup>2</sup> An Introduction to the Study of Labour Problems, by G. S. Watkins, p. 260.

to nearly 23 per cent, profit-sharing scheme being one of the factors responsible for this reduction of wasteful mobility of labour along with several other improvements effected by the Company in their employment section. "This improvement represented a saving to the company of at least \$ 2,040,000." These experiences can be duplicated from the study of the history of the working of companies in America that have a definite and constructive labour policy.

#### IV

That the evils of labour turnover are present in our Indian factories is evident to all those who have been in touch with employees in organised industries. The statistical evidence available at present cannot, however, be made use of to study the extent of the evil or the effects on productive costs. In the authoritative and informative Report of the Royal Commission on Indian Labour, there are a few references to this problem. In this Report, the disadvantages of turnover are summarised thus:

"The constant changing of the labour force in individual establishments, which is associated with the present system, carries with it serious disadvantages, from the point of view both of the management and of the worker. It necessitates the continuous turnover of employees, many of whom may be entirely new to the particular factory and to its machines and methods of working, with a consequent loss of efficiency which reacts on both parties. It also places a serious obstacle in the way of establishing contact between employer and employed and of building up the sense of co-operation; and the worker who returns after a spell in the village, has, in most cases no guarantee of re-employment on his return."

Later the Commission refer to the extent of turnover by stating that "In a large number of factories the fresh employees engaged



each month are at least 5 per cent of the establishment, so that, in a period of less than two years, the fresh engagements exceed the number of the total labour force.”<sup>3</sup> If in the course of two years, the whole labour force should change, one can easily imagine the dislocation of work in a factory. This constant change of employees is a double-wedged weapon of destruction as it hits both the labourer and the employer and thus contributes to an increase in costs. The serious evils resulting from this change of labour force must not blind us to the fact that some amount of labour turnover is inevitable in all industries. Excluding the changes in the labour force brought about by a natural expansion or contraction of any industry, two kinds of labour turnover will have to be distinguished, viz., the Unavoidable and the Avoidable. Labourers that die, fall sick or are fatally injured, children that leave their jobs after they attain manhood, women that leave the jobs after marriage, etc.,—these should be replaced. This inevitable part of labour turnover cannot possibly account for any appreciable portion of replacements in modern industrial establishments. In the United States of America, it was estimated that a decade ago these causes could not account for more than 10 per cent of the total percentage of labour turnover. With the growth of welfare arrangements and greater interest exhibited by the State and the employers in the welfare of their workers and the stringent application of sound Factory Laws, even the small percentage of turnover caused thereby must go down gradually. In our country, it may, perhaps, be right to expect a slightly higher percentage under this head as the rise of a class of industrial labourers dependent for their living mainly on factory wages is itself of recent development with us. The extraordinarily unhealthy, and oftentimes undesirable, conditions of work prevailing in some of our factories, the higher mortality rates among work-

<sup>3</sup> Report of the Royal Commission on Labour in India, pp. 18 and

men and such other causes may account for a slightly higher percentage of the inevitable portion of labour turnover.<sup>4</sup> Speaking of the employment situation in the month of June 1931 in the textile and engineering industries in certain areas, the *Bombay Labour Gazette* which issues its monthly bulletins points out that the average absenteeism in the textile industry as a whole amounted to 8.33 per cent and in the engineering industry, i.e., the representative workshops amounting to 12.64 per cent.<sup>5</sup> This is only a very subordinate factor to be taken into consideration in the computing of labour turnover.

## V

It may be asked—How does labour turnover financially affect the labour costs? In the absence of a contraction in the growth of an industry, the labour force once employed at the beginning must continue to exist till the end. Unless, therefore, the rates of wages are reduced, how can the labour costs be affected whether the wages are paid to the originally employed labourers or to the replaced labourers? How a change in the personnel of the labour force affects a given industry financially, by bringing about an increase in productive costs becomes clear on an analysis of the economic waste really involved with each change in the personnel.

The replacement of a tried employee by another new job-hunter costs the employer differently in different kinds of industries; these vary also with the nature and kind of the employee that severs his connection with the industry. The cost of replacing a clerk in an office or a shop must certainly differ from the cost involved by the replacement of a skilled mechanic or a tried operative working say on the basis of piece wages. In processes involving technical knowledge and expert skill, efficiency grows with experience. It is, therefore, clear that the cost of replacing

<sup>4</sup> Labour in Indian Industries by G. M. Broughton.

<sup>5</sup> Labour Gazette, July 1931, p. 1079.

such labour affects productive costs more heavily than the labour of an unskilled kind. Even in an office the replacement of a tried typist by another allows accumulation of arrears of work with its adverse effects on the efficiency of the office. The principal items of cost relating to the different groups of employees are given below with the object of illustrating how each replacement enhances the productive costs in a given industry.

- (a) Cost of clerical work necessary for hiring fresh labourers.

This hiring expense applies to all kinds of labour fairly equally.

- (b) Cost of instructing the new employees. This varies with the nature of the labour force to be replaced. The variations in the scale of apprenticeship fees charged by the various professional bodies must illustrate the point. With the degree of skill and experience required for efficiency, this cost of training may perhaps be said to vary in direct ratio.

- (c) Cost of increased depreciation resulting in careless handling of machinery and tools by new employees. It may be difficult to fix a correct figure under this head. That changes in labour force do affect the longevity of a machine is a fact beyond any shadow of doubt. Increased depreciation enhances the total productive costs resulting in an increase in the supply price of the commodity produced.

- (d) The greatest loss results from a diminution in the rate of production caused by a change in the personnel of the labour force employed by any industrialist. It may not be out of place to mention that in a banking office with which I am connected as an auditor, the change of employees brought about delay in the preparation of final accounts besides constant loss of income in the way of interest earned short, owing to

defective calculations. It is experience that brings increased dexterity and quickness of workmanship which closely react on the quantity and quality of output produced, which in turn affects the cost of production. Not merely is the yield reduced owing to a diminution in the rate of production, the larger amount of spoiled work further reduces the relation that costs bear to output.

- (e) The new employees being unfamiliar with the work in a factory, that they newly enter, are exposed to injuries and accidents to a greater degree. Extra expenditure on account of compensation and medical assistance to be rendered to them further enhance costs of labour indirectly.

The importance of each of the above factors is also bound to vary with the nature of the workers hired afresh to replace the dismissed or the discharged employees. If the new labourers are those that have migrated from one factory to another, the experience they have acquired may reduce the cost involved in some of the items referred to in the above analysis of costs.

## VI

Whatever may be the final steps taken to solve this problem, the recognition of the evil and the magnitude of its influence have marked a great advance in the development of industry in the countries of the West. The cost per each change in the personnel has been estimated differently by different investigators. A few years before the War, one of the industrial managers appears to have placed this figure at \$30 per man, others suggesting \$50 to \$200 per employee, when the average wage per employee was somewhere about \$600 per annum. This indicates that each labourer replaced meant an extra cost carrying from 5 per cent to 33 per cent of the total labour cost for any given industry. By a proper

appreciation of the costs involved, all avoidable turnover can be reduced by making the labour force once employed stay in the industry. Without hitting the labourers, the employers stand to gain largely as they can effectively reduce a portion of labour costs which figure prominently in the total cost of production produced in the modern industrial world. "The capitalist and employer in India are the product of Western influences; the spirit of Western industrialism has entered into their souls through the training they may have received much more than through the wealth they have gathered or inherited."<sup>6</sup> Is it not essential that a machinery should be devised to reestablish under modern conditions the human factor in the industrial life of our country?

<sup>6</sup> The Wealth of India, by Wadia and Joshi, p. 381.

# TRADE-BOOMS AND DEPRESSIONS : THEORY AND FACTS

BY

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## SUMMARY

Section 1 outlines the issues involved in the theory of the trade-cycle. Section 2 attempts to set out briefly the conclusions which may be said to have been established more or less firmly till now. Section 3 outlines the theory of Prof. J. M. Keynes as advanced by him in his *Treatise On Money*. Section 4 is a statistical study of the main features of the present trade-depression as it has developed in India. Section 5 is devoted to a statistical study of the temporal order of events in a trade-cycle in India and elsewhere.\*

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### ( 1 )

“Industrial Fluctuations”—the new phrase conveys an implication of its own—raise several questions in economic theory to some of which at any rate no complete or conclusive answer is yet available. We may cite here the most outstanding among them—if only to throw into bold relief the limited nature of the ground covered in this Paper. What are the common characteristics and distinguishing symptoms of the fluctuations which an adequate theory must fully account for? The characteristics most frequently adduced are—synchronism<sup>1</sup>; periodicity<sup>2</sup>; international scope;

<sup>1</sup> Dr. Snow (*Trade-Forecasting and Prices*) has some contrary facts to offer as regards the alleged synchronism. *Journal of R.S.S.*, May 1923.

<sup>2</sup> See Dr. Cannan's criticism in his review of *The Problem of Unemployment*, *Journal of Royal Economic Society*, Vol. XI, p. 45.

\* The present paper was completed before the collapse of the pound occurred and no alterations have been made subsequently.

high intensity relatively in industrial countries. What are the initiating causes and how far are they inherent in our present economic structure or removable by human agency? There is no definite or complete agreement on the first question and to that extent the answer to the second question must be only provisional. Is it desirable to eradicate if possible the trade-cycle entirely? The answer will obviously depend in a large measure on the theory of causation on which economists are able to agree. Prof. Robertson, for example, is more inclined to the view that the "automatics lacking" which is enforced by the ascending phase of the cycle is a necessary condition of economic progress in a society based largely on the principle of competition.<sup>3</sup> Prof. Keynes, among other criticisms, points out that this view overlooks or under-estimates the enormous moral and material losses caused by the downward phase of the cycle.<sup>4</sup> What are the other incidental conditions which increase or decrease the amplitudes of the fluctuations, and how far will the control of these conditions allay the moral and material wastes of the cycles? Happily, there is a substantial unanimity among economists on these points. Scientific management of the bank-rate and the allied banking policy, diffusion of accurate information regarding money, trade and industry, a better control and direction of investment, etc., are proposed and accepted as the most effective remedies for the malady. What is the order in time and magnitude of the various economic and other changes which are the concomitants of the trade-cycle? It is evident that the remedies proposed must stand the test of the limitations revealed by the statistical analysis of the phenomenon.

The best indices of industrial fluctuations appear to be changes in aggregate production or unemployment percentages. Aggregate production or even changes in the rate of production are not always easy to interpret since changes in the technique of production and efficiency have to necessarily be allowed for. Figures

<sup>3</sup> See *Banking Policy and Price-Level*, pp. 78—80.

<sup>4</sup> *Treatise*, Vol. 1, Chapter 19.

of unemployment are a more reliable index. Even then, these percentages are gravely complicated and the inferences from them obscured by factors like seasonal *vs.* continuous unemployment, short-term *vs.* long-term employment, labour-transfer from decadent to better placed industries and other purely local circumstances. Perhaps, a composite index of bank-clearings from which purely financial transactions are eliminated, unemployment percentages corrected for seasonal or secular trends, prices of raw-materials and other goods, movements of wages, etc., as proposed by Prof. Keynes may answer our present purpose better.<sup>5</sup>

Every cycle has its own peculiarities ; and, as pointed out above, its appearance in different countries is apt to be much overcast by purely local factors: (a) Before the War, there was a tendency for the interval between the maxima of activity of successive cycles to grow shorter and shorter. The post-depression appears to be unusually prolonged. (b) Its appearance in the different parts of the world was tending to become more and more simultaneous. The present depression spread, however, very tardily—on account perhaps of increased post-war economic isolation of nations in which tariffs and dislinked currency systems are the most important elements. (c) Some booms have been largely booms of prices (1920); some, of enthusiastic investment and production (Railways, 1845—17; Iron and Steel, 1872); some, of discoveries, inventions (Iron and Steel, 1882; Electrical Booms of 1895, 1900 and 1907) and so on. (d) Industrial communities with large foreign trade in particular suffered most acutely. In the present depression, agricultural countries have been hit equally hard.

( 2 )

The following important points may be said to have been established more or less securely: (1) Harvest-changes may or may not be present among the initial events of any particular trade-cycle; their effects on industrial activity are not invariably the

<sup>5</sup> Treatise, Vol. I, 87.



same. World-harvest-cycles, if any, can be distinguished, and trade-cycles do not coincide either in point of time or duration. (2) The classical theory of over-production or the Hobsonian doctrine of over-investment and under-consumption does not stand the test either of logic or of facts and statistics. (3) Errors of optimism and pessimism—the working of crowd-psychology is perhaps the most important factor in the duration and amplitude of a cycle. But crowd-psychology cannot generate itself without an appropriate industrial and monetary environment. (4) The ordinary secular changes in the price-level due to changes in gold-output and industrial and credit-structures are important from the standpoint of the duration and amplitude of the fluctuations. But the occurrence of the cycle itself is independent of the upward or downward trend of prices—as is proved by the history of the last one hundred years and more. (5) Banking policies are probably the true explanation of the international character of the trade-cycle and also the factor of “periodicity” or “rhythm”—words the precise meanings of which have yet to be made definite. Better adjustments in the timing and magnitude of changes in the discount rate and open market operations will moderate markedly the amplitudes of the fluctuations. It does not appear likely, however, that the initial impulses to the fluctuations emanate from the banks, which are apt to wait on events to guide their policies. The relationship sought to be established by Mr. Hawtrey between the bank-rate on the one hand and the stocks of dealers and the cash-balances of the community on the other is not likely to be more than a minor influence in the causation of the cycles.<sup>6</sup> (6) Apart from harvest-variations, other “real” causes like invention, changes in tastes, etc., must be given their due place as likely initiating causes or impulses in these trade-fluctuations. The repercussions of a change in the demand or supply schedules of one product upon the output of or demand for other products and

<sup>6</sup> See the review of ‘Trade and Credit’ by the present writer in the Journal, April 1930, pp. 893—897.

particularly capital goods are limited by the respective elasticities of demand and supply. But as Prof. Robertson points out, "appropriate" fluctuations tend to become "inappropriate" fluctuations on account of certain peculiarities of industry and industrial organization like imperfect divisibility and "intractability" of capital goods, difficulties of transfer of productive resources, the effect on employers, as contrasted with labourers, of prosperity, price-changes, altered costs, etc. Nevertheless, it is necessary to bear in mind that these impulses cannot travel and diffuse themselves very far without calling for appropriate changes in the supplies of money. The motives to increased or diminished activity are the increased or diminished expectations of money profits and not abstract, academic divergence between marginal utilities and costs or disutilities.

The nature of the clue we must set out for in the solution of the problem before us may be said to be contained in the following passage taken from Mr. P. W. Martin's "The Flaw In The Price-System" (pp. 36-37):

"It is evident that all . . . goods can and will be bought so long as two essential conditions are fulfilled. In the first place, wages and dividends distributed in the course of making and selling goods must not be less than the price charged for these goods; if they are less, obviously the community will not be able to buy all the goods made. In the second place, the community must use all these wages and dividends to buy goods, otherwise, while having the necessary purchasing power, it will nevertheless not be able to buy all that is made."

This statement of the problem conceals no doubt the immense difficulties involved. It does not bring out clearly the distinction between consumption-goods and capital-goods and consequently also the importance of the decisions which the community makes regarding its "expenditure" and its "saving." As a matter of fact, Mr. Martin finds the cause of the disequilibrium in the diversion of profits and the creation of loans for increasing working-

capital in the ascending phase. This, in his opinion, leaves a continuously increasing surplus of goods unsold—which inevitably causes the depression when further creation of bank-money is arrested or stopped. This view appears to involve two errors. As for the undivided part of profits, it does not appear likely that it contributes in any significant degree to the required increase in working capital. In his argument about loans, Mr. Martin has overlooked the fact that additional working capital does not call for any additional “ saving-activity ” but is a mere substitution of consumption of one type by consumption of another type. The loans in so far as they do not represent permanent savings are in addition to the purchasing power—and represent the goods filched from others through a rise of prices. But these points bring us to the *magnum opus* of Keynes’ “ The Treatise On Money.”

Prof. Keynes’ “ The Treatise On Money ” is a distinct landmark in the long-drawn discussion of the theory of industrial fluctuations. We must perforce pass by here many of the side-issues and statistical verifications of his thesis—very important and profoundly interesting in themselves as they are. Even the main theory itself cannot receive from us in this place any higher compliment than a skeleton description and a bare indication of possible lines of criticism.

The price-level of output as a whole is made up of the price-level of consumption-goods and the price-level of investment-goods—the latter of which include fixed capital, working capital and stocks or liquid capital.<sup>7</sup> The two price-levels may and as a

<sup>7</sup> It is necessary to the understanding of Prof. Keynes’ theory to bear in mind the various magnitudes involved. He puts the working capital for England and U. S. A. at about half the national income. The fluctuations in its volume during boom and depression are estimated to be from 13 to 25 per cent on either side—one-third to half of the annual normal savings which form about 20 to 30 per cent of the national income. Liquid capital or stocks are quite small as compared with the volume of working capital and do not fluctuate much—increasing in times of boom and falling in times of depression.

matter of fact do diverge over short-periods which are the subject-matter of study in the present case. The causes which disturb the price-level of output in the aggregate and consequently the equilibrium between production and consumption may be classified as (1) changes due to monetary factors, (2) changes due to investment factors, and (3) changes due to industrial factors. A disturbance originating in any one of them must work itself out through reactions on investment factors and is terminated only when appropriate changes in industrial factors—in output and money-rates of efficiency earnings—are brought about. The types of disequilibria started differ, however, according to the originating cause. Changes in the supply of money mean only a transition from one equilibrium price-level to another equilibrium price-level. It is quite different with changes initiated by investment factors; an excess movement set up by them in one direction tends inevitably to produce later an excess movement in the opposite direction. As such, changes due to investment factors are, therefore, most relevant to the analysis of the causes of the trade cycle.

Professor Keynes rejects the traditional forms of the quantity theory equations on grounds which are not altogether convincing or properly weighed. In his own equations, the price-level of any class of goods appears as a function of two variables which are not always interdependent—namely, the average cost of production per unit and the average profit—positive or negative—per unit. In one sense, this relationship is indeed self-evident. The prices paid for goods must always cover the total cost of production plus the total profits and minus the total losses; if any aggregate profits or losses emerge, it is because the price per unit is to that extent above or below the cost per unit. But the novelty and power of Prof. Keynes' theory lie in his analysis and version of the mechanism of profits. In the case of consumption-goods, profits are proved to be the excess or deficit of cost of (the net increment of) investment goods over savings. In the case of output as a whole, profits are shown to be the excess or deficit of value of in-

vestment-goods over savings. Hence, if the money-rates of efficiency-earnings do not change, then the price-levels must rise or fall according as cost and value of new investment-goods run ahead of or lag behind savings. It is an important inference from this that in Prof. Keynes' analysis the presence of aggregate profits or losses constitutes the incentive to phases of expansion or contraction of output. Thus, the factors which influence or direct the course of new net investment—the Standards and the Banking Machinery—are represented as the arbiters of purchasing power; in them lie the true dynamics of the price-levels.

This requires perhaps some further explanation to convey an adequate understanding of the argument. Take the price-level of consumption-goods, for illustration. On the one hand, there is the total cost of production of all output which is distributed as income among the factors of production and which is subsequently allotted by individuals to direct enjoyment or to saving. In so far as goods are absorbed for direct enjoyment, the circle of production and consumption is maintained and no disturbance to the economic machine arises. If (the cost of) new investment,—i.e., the use of consumption-goods for “productive” purposes—corresponded in a similar manner to the savings of the community, then it would also cause no disturbance. But, says Prof. Keynes following Wicksell, there is no direct connection between the “activity” of saving which is more or less continuous and stable and the process of “investment” which is apt to be sporadic and cyclical. When more is sought to be invested than savings justify, the price-level of consumption-goods rises; the contrary happens when investment lags behind savings.

The value and cost of production of investment-goods are independent of the savings of the community and of each other. The disequilibrium between cost of production of investment-goods and savings arises in this manner. To any quantity of savings, there corresponds a “natural” or appropriate rate of interest at which they would be duly absorbed by the enterprizers. But, on

account of the preoccupation of the banking-system with other ends, the market-rate by which we are to understand "the complex of interest-rates effective in the market at any time for the borrowing and lending of money for short periods" rarely corresponds to the "natural" rate. When it lags behind, the cost of investment-goods tends to exceed savings—with profits for the producers of consumption-goods. The reverse happens when it overshoots savings. The situation in each case is aggravated by the fact that movements in the bank-rate when believed to be temporary lead to anticipatory hastening or postponement of investment plans and that they cause savings to move in a direction opposite to the cost and value of investment-goods.<sup>8</sup>

The effect on the producers of consumption-goods is, however, subsequent to the direct and immediate effect on the value of investment-goods—effect which differs according to the durability of the goods. Apart from the expected income, the value of investment-goods depends on the rate of interest at which future income is discounted and the attitude of the people towards savings-deposits as against securities. Ultimately, of course, the rate allowed on savings-deposits and the prices of securities must depend on the bank-rate and the banking-policy. A rise in the bank-rate depresses the prices of investment-goods and securities and a fall tends to raise them. The price-level of consumption-goods will then move in the same direction, at first in response to the rate of savings, but later and in a greater measure, in response to the change in the prices of investment-goods. The volume of employment and the rates of efficiency-earnings will move signifi-

<sup>8</sup> Prof. Robertson (Banking-Policy and Price-Level) pointed out that the valuation of capital-goods is in a direction opposite to the rate of savings; that increased expenses of boom phase impair saving capacity; and that increased costliness of working-capital—whether for operation or quotation of working capital-goods—must compel a revaluation.

cantly in the last stage when equilibrium will be restored by means of alterations in employment and income-levels.

The excess investment of the boom-phase may take the form of more capital-goods, in place of the previous consumption-goods; or more capital-goods in addition to the existing flow of consumption-goods; or mere additional consumption-goods. In the first alternative, the price-level of consumption-goods will rise after one production cycle is complete. In the other two cases, the rise in the price-level of liquid and working capital will be almost immediate. If there is any incidental increase in the rates of efficiency-earnings, then the rise in the price-level due to additional investment will be superposed on the rise due to the former cause. In the next or secondary phase of the cycle, the prices of all consumption-goods will rise—particularly under the influence of the dealers who will find their stocks melting away with wind-fall profits for themselves. The collapse will begin when the additional consumption-goods appropriate to the additional investment are thrown on the market—which will depend in its turn on the length of the production-cycle. The period of the depression will depend among other causes indicated in the second section on the nature and duration of the existing contracts.

The additional working capital required for the boom-phase is secured largely through the rise of prices and the consequent curtailment of consumption and to a small extent only from the liquid-consumption-goods in stock. In the depression period, the process is reversed and working capital is dissipated on account of the increased purchasing power of income—in absence of investment-activity. It is in this way that the excess or deficit of cost of investment over savings is brought into existence. This fact explains also how the prosperity phase can gather but slowly, while, when it finally breaks, the decline into slump is very precipitate. The working-capital required by modern industry with its round-about processes is very huge and its accumulation by the aforesaid transfer is bound to be but very tardy. The expenses of holding

liquid consumption-goods—of which interest is but a small item—are on the other hand very burdensome and once prices tend downward, their rapid disposal makes the break sudden and complete.<sup>9</sup>

In the tables given in this section, I have made an attempt to set out in a broad manner the main features of the economic situation in India during the last ten years of trade-depression.\*

<sup>9</sup> For a non-technical in over-simplified account of the theory by Keynes himself see the *Nation and Athenaeum*, 20th December, 1930, and 27th December, 1930.

\* In the compilation of index-numbers given in this paper, the geometric mean was used whenever no weighting was involved and the arithmetic mean when weights were employed.

The index of business activity was made up of the following series. (1) Numbers and values of civil suits and registrations—4; (2) rail-carried goods, total shipping tonnage cleared, gross railway earnings—3; (3) total sea-trade and coasting trade—2; (4) Number of letters, telegraphic messages and values of money-orders issued.

The index of production (weighted) consists of the following three series: (5) Production of wheat, rice, cotton, jute, rapeseed, linseed, and total sown area; (6) British India production of cotton goods, woollen goods, paper, Brewery-liquor, consumption of jute in mills, paid-up capital of Joint Stock Companies. This is a weighted series as follows: cotton goods—10; jute-consumption—5, Paid-up capital—2; the rest 1 each; (7) Production of coal, petroleum and iron. The three series were weighted as 20: 4: 1.

Wherever values are involved, they were adjusted according to a composite index-number made up of the Bombay Whole-Sale Prices Index Number and the Bombay Cost of Living Index-Number in the proportion of 1 to 3. The latter index number may be taken to represent wages, transport charges and retail and wholesale distributing charges, services, etc., which the former reflects but indifferently and with significant time-lag.

The prices index-numbers were constructed from "Annual Average Wholesale prices of Staple Commodities in India" given in Table 294 of Statistical abstract while the prices of manufactured articles were taken from "wholesale prices of staple articles of export and import," Table 292, Seventh Issue.



TABLE 1

Years.	1 Prices of Agri- cultural Pro- ducts *	2 Prices of Manufactured Products, †	3 Ratio of Manu- factured Arti- cles to Agri- cultural Pro- ducts. 2/1	4 Prices of seven Food-grains.‡
	1914-100	1914-100	.	1921-155.9
1920	158.9	260.2	163.8	...
1921	155.9	219.2	140.6	155.9
1922	155.6	195.5	151.1	144.1
1923	140.3	193.6	138.0	112.8
1924	149.8	211.2	141.4	120.3
1925	152.4	193.5	126.9	137.8
1926	138.4	169.0	123.4	139.0
1927	131.2	151.8	115.7	
1928	123.8	136.9	106.4	(Cereals and Pulses)
1929	133.7§			139§
1930	106.9§			120§

All sections of producers have suffered immense losses on account of the unexampled violence with which prices have fallen during the last ten years. The distress of industries like agriculture which employ more fixed capital relatively, or which cannot change over from one branch of production to another has been much more acute than in the case of others. But a still greater disaster has overtaken agriculture in that the ratio of exchange has been heavily against agricultural products and in favour of manufactures. As the table indicates, the ratio was heavily against agriculture till 1925. Thereafter, there set in a tendency to a rapid restoration

\* Wheat, rice, cotton, jute, rape-seed, linseed.

† 2 Cotton Yarns, shirtings, gunny bags, sugar, kerosene.

‡ Compiled on the chain method—each year being the base for the next. Weights were assigned on the basis of production figures given in Currency and Prices for the years 1911-14, p. 392.

§ These are the geometric means of price-percentages for cereals, pulses, tea, oilseeds, raw and manufactured jute, hides and skins given in the Currency Controller's Report, 1929-30. The base year is the same, i.e., 1914-100.

of the pre-war parity, which was almost attained by 1928. Unfortunately, the catastrophic fall of 1930 has again initiated a severe disequilibrium from which no recovery can be expected for some years to come. Another noteworthy feature of the table is the tendency of prices of food-grains to fall more quickly than the prices of other agricultural products—although in recent years a distinct improvement has taken place in favour of food-grains. Food-grains—it is hardly necessary to add—cover the greater part of the area under cultivation; and the elasticity of demand for them is much less than unity.

TABLE 2

		Wheat per Md.	Cotton per 4/5 Candy	Rape-seed Md.	Rice Cwt.	Cotton-seed per Cwt.	Jute, 4/5 Candy	Linseed Md.
1911—14	...	100	134·8	156·8	137·7	92·39	87·4	180·1
Prices								
1924—28	...	100	134·8	137·8	113·9	66·9	57·0	129·0
1911—14	...	100	61·5	16·3	320·0		13·12	11·8
Acres.								
1914—28	...	100	67·7	13·6	323·2		21·76	9·7
Acres. Ms.								
1914—28	...	97·3	65·9	13·3	314·0		12·4	9·5

In this table, the average wholesale prices and areas under cultivation are expressed as percentages of the corresponding figures for wheat; it thus sets out the relative position of the various crops.

Cotton has improved its price relatively to all other crops except wheat and it has made the biggest gain in acreage. The

price of wheat has improved relatively to all other crops—perhaps due to the disappearance of Russia from the market. Rice, jute, and linseed have lost their position heavily in regard to price and all except rice in regard to acreage also. Perhaps the changes in acreages are retarded by natural inertia and considerations of physical conditions.

TABLE 3

		Industrial Production Index.	Annual increase or decrease in paid-up Capital of Joint Stock Companies.	Annual increase or decrease in number of Joint Stock Companies.	Average daily workers employed in industries.—All India	Imports and production of Iron and Steel.	Imports of Gold.	Changes in Interest bearing obligation of Government in India.
		1914-100			000s	000 tons	Lacs of Oz.	Crores
1918-19	...	113·7	...	...	...	...	- 9	...
1919-20	...	118·9	+ 15	787	1369	...	+56	...
1920-21	...	111·9	+38	783	1479	1269	+8	...
1921-22	...	110·8	+64	498	...	1554	- 2	...
1922-23	...	112·8	+26	4	...	1371	+58	...
1923-24	...	118·4	+4·7 (24)*	35	...	1577	+43	+10·53
1924-25	...	130·0	+12·0 (23)	2	...	2313	+119	+28·13
1925-26	...	130·2	+1·2 (34)	104	...	2427	+69	+24·72
1926-27	...	141·2	+0·1 (20)	230	1686	2500	+32	+13·90
1927-28	...	161·5	+0·3 (21)	232	1889	3046	+32	+13·22
1928-29	...	...	(28)	..	...	...	...	+35·78
1929-30	...	...	(67)	...	...	...	...	+47·83
1930-31	...	...	(29)	..	...	...	...	...

\* Figures in brackets are capital issues of Joint-Stock Companies for calendar years for British India. The Post Office Savings and Five Years Cash certificates aggregated from 1922 to 26, 33, 38, 48, 56, 63,

Barring the three years succeeding the crisis of 1920-21, production in industries has made rapid progress. The consumption of iron and steel indicates a similar activity in the constructional trades. It would be a fruitful and instructive inquiry to find out how far this result has been the outcome of heavy tariffs and high level of import duties in general. The future of the ratio of exchange between agricultural and industrial products is obviously bound up with the tariff policy of the country.

On the other side, the decline in the annual increment of paid-up capital points to a reduction in investment or savings or both—what is available being just sufficient to fill the void created by losses and insolvencies of the last ten disastrous years. It is, perhaps, likely also that a part of the savings which are ordinarily invested in industries has been frightened into gold and silver hoards or into Government loans with their security of interest and capital. But, more important than all other causes of the decline, is the undoubted migration of capital from India during the last few years due to high interest-rates abroad caused largely by the existence of distress-borrowers mostly governments and perhaps to some extent to political instability. The total visible balance of accounts after allowing for government-remittances has increased from an average of five crores for the ten years ending in 1913-14 to 26 crores for the ten years ending in 1928-29. For the years 1927-28, 1928-29, and 1929-30, it stands at 12, 11 and 32 crores respectively. As no corresponding increase in our external obligations can be postulated, the implied flight of capital becomes a matter of grave concern.

66, and 72. It may be noted here prices of shares and stocks reached their maximum in 1929 in U.S. and France; in 1928 in England; and in 1927 in Germany; this accords well with the events of the recent gold and banking crises.

TABLE 4

Years.	Index of Agricultural Production.	Index of Industrial Production.	Index of Mineral Production.	Prices (wholesale Average Bombay- Calcutta).*
1918-19	81.66	113.7	116.3	209
1919-20	104.5	118.9	128.0	208
1920-21	87.93	111.9	116.5	188
1921-22	107.8	110.8	144.2	181
1922-23	110.2	112.8	124.2	176
1923-24	102.4	118.4	136.8	177
1924-25	108.3	130.3	169.0	161
1925-26	105.1	130.2	171.9	148
1926-27	101.3	141.2	174.0	147
1927-28	99.79	161.5	194.5	146
1928-29	...	...	...	143
1929-30	...	...	...	...
1930-31	...	...	...	...
1931	...	...	...	...

\* Calendar Years.

But for the small depression in the crisis of 1920, mineral production has advanced continuously and rapidly during the whole of the period. The index of industrial production was recovering slowly till 1923-24, after which it made very rapid progress. It is only in agriculture that progress appears to be maintained but slowly and painfully. If seasonal fluctuations were left out of account, it is even doubtful whether any significant improvement has taken place. When we remember the rapid growth of population in recent years, this appears a grave situation the ominousness of which is relieved only by the probable increased capacity of industries to absorb more labour.

TABLE 5

Years.	Consumption or Composite Index.	Weighted Index of Production.	Index of Business Activity	Net-Rupee Coinage.	Total Rupee and Note Absorption.	Average Active Note Circulation	Total Private Deposits.	Bank-Clearings.	Adjusted Index to Government and Local Expenditure.
	1914-100	1914-100	1914-100	Crores	Crores	Crores	Crores	Crores	1914-100
1918-19	196.5	88.1	84.43	52.21		113			62.17
1919-20	197.2	106.9	97.29	38.00	+40	151	211	1804	65.58
1920-21	194.5	92.8	107.4	4.51	- 51 (- 25)*	158	235	3151†	77.89
1921-22	182.1	109.7	102.0	1.66	- 1 (- 10)	152	227	2025 (209)	86.96
1922-23	170.5	111.1	105.5	62	- 5 (- 9)	153	209	2022 (212)	111.7
1923-24	150.0	106.2	112.2	52	+ 15 (+ 7)	156	198	1855 (215)	114.9
1924-25	163.2	115.0	110.5	45	+ 1 (+ 3)	160	210	1778 (224)	119.2
1925-26	158.5	107.5	114.4	64	- 7 (- 8)	163	211	1770 (233)	123.7
1926-27	155.0	110.5	112.1	50	- 23 (- 19)	156	215	1591 (239)	128.4
1927-28	153.7	115.5	118.8	10	+ 6 (- 3)	162	212	1649 (225)	128.4
1928-29					+ 5 (- 3)	171	216	1853 (230)	

\* Figures in brackets give the absorption of rupees only. Between 31st December, 1923, and 31st December, 1929 the net absorption of notes and coin was 2.32 crores.

† Figures in brackets give bank-clearings for centres outside Bombay and Calcutta, i.e., Madras, Karachi, Rangoon, Cawnpore, Lahore. The figures are all for calendar years.

The index of production makes it clear that our output has steadily improved—due largely to the significant progress of mineral and industrial production. The index of business activity records a similar, steady improvement—after the break of 1920 was made good in the next two or three years. The figures of bank-clearings of centres outside Bombay and Calcutta—which may be taken to represent genuine trade and business as distinguished from mere financial and speculative transactions—confirm the same conclusion.<sup>10</sup> These facts make it clear that the difference between the two phases of a trade-cycle lies from the standpoint of aggregate output in significant changes in the rate of progress rather than a reversal of progress itself. This statement is, of course, less true of countries like England which depend for their prosperity on external trade; even there, a fall in output is a very exceptional event. For the business community a depression means slender profits, elimination of unsound ventures, a general effort after more efficiency and a general disinclination for risk and bold enterprise.

The changes in the currency circulation are of like nature. But for one or two years of decline after the crisis of 1920, note-circulation and deposit currency<sup>11</sup> seem on the whole to be increasing slowly year after year. But, as the figures of bank-clearings indicate, the velocity of the bank-currency and presumably there-

<sup>10</sup> Prof. Keynes would regard an index based on these figures adjusted to a 'consumption' index as the best measure of business activity. *Treatise*, Vol. 2, pp. 82—90.

<sup>11</sup> These require to be carefully interpreted, since we do not know the distribution between income and business deposits on the one hand and savings deposits on the other. Prof. Keynes gives half and half as his estimate for U.S. and England displacing Prof. Fisher's widely different estimate. I had assumed the same ratio—half and half for India [*Currency and Prices* (418-19)]. It is an important point to remember that the proportion may change significantly in a period of depression—savings-deposits increasing relatively. See *Treatise*, Vol. 2, Chap. 23.

fore of notes also has been falling very violently—reducing their true efficiency to a very low level.

The absolute negative changes are confined exclusively to rupee-circulation—if we may base a surmise on returns of rupee circulation. There appears to have taken place a small decrease in rupee circulation in the last ten years. It is not quite clear yet whether there exists in India any functional relationship between notes and deposit-currency on the one hand and rupee circulation on the other.<sup>12</sup> In advanced countries, a coin like the rupee would act as small change and would increase and decrease in volume according to the changes in notes and deposit-currency. In the absence of definite proof, a surmise or two may however, be offered. It is probable that the aggregate volume of notes and deposits subject to cheque exceeds the total rupees in circulation. If their velocities are also taken into account, then the effective work of the first two media of exchange must be markedly larger than that discharged by the rupee. If this estimate of relative magnitudes is correct, the fall in rupee circulation must be considered as an effect of the reduced velocities of notes and cheques. From 31st January, 1930, to 31st December, 1929, the busy season absorption of coin was 19 crores while the slack season return was 103 crores. The corresponding figures for notes were 242 crores and 233 crores respectively.

Thus, the fall of prices in India has been brought about by the growth of output and business on the one hand and the decrease in the rate of expansion of currency and the violent fall in its

<sup>12</sup> On the basis of the estimates of rupee-circulation from the rupee censuses (estimates which appear to me very unreliable when compared with rupee-coinages and absorption) and the active note-circulation, I tried to find out whether any equation could be established between the two which would give values within a small margin of divergence from the actuals. The effort was not very successful. The equation actually found was  $\log y = .266 + .01564x + .00004588x^2$ . The calculation ignores of course the complicating factor of velocities between which we may assume a constant relationship.



velocity<sup>13</sup> on the other. It should be instructive to compare the present rates of expansion with the pre-war rates when prices and business were on the ascending grade. If straight lines are fitted to the data for 1899—1913 with 1906 as origin, the rates of expansion per annum work out at .09 or 1/11th for deposits; .041 or 1/25th for notes; and .003 or 1/33rd for deposits. A cursory inspection will show that the rates of expansion for notes and deposits have been very small comparatively for the last ten years while the rupee circulation has actually declined.<sup>14</sup>

It is not strictly relevant to recall here the well-worn story of the new exchange-rate or to describe and criticize the actual technique of deflation practised by the Currency-Authority. Still less can we notice in detail the annual recriminations between Government and traders which really centre round the management of seasonal expansions and contractions rather than the ideal currency-policy. The agricultural seasons were quite good from 1922 to 1928; and in 1923 the Government recognised the need of greater elasticity by amending the P. C. Act to provide for a maximum seasonal advance of 12 crores from the Reserve against

<sup>13</sup> Prof. Keynes would ascribe the change in the velocity of cash-deposits in the aggregate ( $v$ ) more to changes in the proportions of the component types of deposits, viz., incomes deposits, industrial deposits and financial circulation deposits (the velocities  $V_1$ ,  $V_2$ , and  $V_3$ , of each of which is quite different from those of others) than to any change in the true velocities themselves. *Treatise*, Vol. 2 pp. 79—82; 40—43; 34; Keynes estimates for Britain are  $V=60$ ;  $V_1=11$  weighted average of  $V_2$  and  $V_3=77$ .  $V_1$  is most stable while  $V_2$  fluctuates more and differently from  $V_3$ .

<sup>14</sup> The actual equations found out were:  $\log y = 1.746 + .03753X$   
 $\log y = 1.529 + .01764X$   
 $\log y = 2.14 + .001421X$

The curious will find the following equations of the 2nd degree more interesting—

$$\begin{aligned}\log y &= 1.756 + .03753X - .0006981X^2/s \\ \log y &= 1.5363 + .01764X - .0004298X^2/s \\ \log y &= 2.1158 + .001421X + .001137X^2/s\end{aligned}$$

inland bills. But, in the very next year, partly on account of high prices and large exports, very high money-rates prevailed and in 1925 the P. C. Act had again to be amended to raise the limit of sterling investments in the Reserve from 85 to 100 crores. At the same time, from 1923 onwards, Government have accepted the wisdom of suiting the time, manner and conditions of the issue of its loans and treasury bills and the management of its remittance and revenue operations in general to the seasonal requirements of trade and industry. From 1926-27, the fall of prices and dull trade have led to an abundance of funds and easy-money-rates while weak exchange has stood in the way of obtaining sufficient sterling-bills for Home-Remittances. The situation became more embarrassing in 1929 and 1930—first on account of the abnormal movement of gold to New York and, after the great crisis there, the scramble for gold in which France and United States swallowed all the output of 1929 and much more, largely at the expense of England. In India the exchange-rate fell to the lowest point; money-rates were divorced from the bank-rate more than ever and the spread between the highest and lowest points was abnormally wide. The Currency Authority tried with but limited success to make the Rate effective by heavy contractions and the use of treasury-bills and remittance operations. While big influxes of rupees were occurring, the sterling-securities in the London Branch of the P. C. R. and the Rupee-securities in the Indian branch were progressively eliminated; and heavy sales of silver even at falling prices were undertaken to replenish the evanescent reserves. In the meanwhile, on account of complex causes, capital is fast emigrating—to the great and continuous depreciation of government securities and industrial shares.

It is hardly necessary to remind ourselves of the international character of our present currency problems. Most of us cannot have forgotten the brilliant exposition of Sir Henry Strakosh in his recent celebrated memorandum on the subject. I shall take the liberty to repeat a few central facts. In 1925, England re-

turned to the gold-standard; in 1926 and 1927, Denmark, Norway, Poland and Italy; in 1928, France, Greece and Esthonia; in 1929, Japan—while, in the meantime, the rate of output of gold has steadily declined. The distribution of gold in the currency reserves is at present £3-3-0 per head for Great Britain; £6-7-0 for United States; £8-0-0 for France; £9-4-0 for Argentina; these disparities have nothing to do with the relative efficiencies of the credit-systems of these countries. In 1929, France and United States of America manoeuvred to absorb, largely by withdrawing their short-term credit in the world-markets, all the output of the year and even extracted substantial amounts from the currency stocks of other countries.<sup>15</sup> The consequence of all this is seen in the rapid appreciation of gold by more than 32 per cent between 1925 and 1930 and again in the present year.

This paper concludes for lack of requisite statistics with the year 1928. But it has been during 1929 and 1930 that we have all become aware more than ever of the dark shadow of an unparalleled catastrophe under which we are living—the unexampled fall of prices. From June 1930 to June 1931, the following percentage falls have been reported. Cotton—16. Raw Jute—17. Paddy (Rangoon)—58. Rice (big)—59. Tea—43. Wheat—46. Ground-nut—40. Arithmetic-Average—44 per cent.

As one contemplates these figures, one cannot but be moved and moved very deeply by the net amount of undeserved and unescapable suffering which they imply—suffering greater in its intensity and magnitude than any inflicted on humanity by “battles, sieges and moving accidents by flood and fire.” There is a pathetic interest in recalling the words of Marshall written at the very outset of the present slump just a year before his passing away—“And I am soon to go away; but if I have opportunity,

<sup>15</sup> For a study of gold-movements undertaken on account of “special transactions,” i.e., without any profit motive and their increasing ratio to “commercial transactions” see ‘International Gold Movements,’ by Paulbinzig (Macmillan).

I shall ask newcomers to the celestial regions whether you (Keynes) have succeeded in finding a remedy for currency maladies."

The statistics relating to the trade-cycle raise very important issues both in economic theory and in statistical method. In some cases, the practicability of the remedies proposed has to be judged by the conditions set by the statistical facts about the trade-cycle. An effort has been made in the following table to set out the order in time and magnitude of the various changes which occur in the course of a cycle. It is evident that questions of time-lag and indices of correlation are largely involved in the inquiry. But, even from the theoretical side, the difficulties raised by the table are not small.

- |  |  |
|--|--|
| (1) Pressure on dealers for consumption-goods. | No general rise of prices; the additional currency |
|--|--|

<i>N.B.</i> —Stocks are accumulated during boom and dispersed during depression. (Industrial Fluctuations—27.) Hawtrey is non-committal (Trade and Credit, 159-60.) See also Robertson, Banking Policy and Price-Level, 82-83.	being supplied out of rapid turnover of bank-balances, i.e., cessation of "hoarding" and direct loans out of currency hoards;
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- |  |   |
|--|---|
| (2) Producers' pressure on constructional and building industries—first to revive. | the working capital is supplied out of stocks and extra work. |
|--|---|

- |  |  |
|--|--|
| (3) Fall in unemployment figures (Industrial Fluctuations—192—95.) |  |
|--|--|

- |   |  |
|---|--|
| (4) Rise in prices of speculative stocks. |  |
|---|--|

<i>N.B.</i> —Increase in stock-Exchange loans takes place at the expense of income deposits and that part of business-deposits held for industrial purposes.	
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- |   |  |
|---|--|
| (5) Increase in the rate of credit-creation by the banks. |  |
|---|--|

*N.B.*—Except in rare cases, aggregate credit does not decrease after the break in boom and may even increase slowly. The difference between booms and depressions lies in changes in the rate of credit creation and not absolute changes. We have also to note the increase of financial circulation and fall in bank-clearings, i.e., velocity of circulation (Taylor, *Credit-System*, Part 4, Chapter 8).

- (6) Changes in reserve-proportions (*Industrial Fluctuations*, 255—57. Keynes' criticism of Pigou, *Treatise*, Vol. 2, 53. His own figures relate to a few recent years. Also Hawtrey, *Trade and Credit*, 171—175.)
- (7) Prices of ordinary stocks—then of raw materials—then manufactured goods.
- (8) Tentative movements in discount-rates.

*N.B.*—Do they affect dealers more than producers? Keynes, *Ibid.*, 193—

- (9) Movements of wages and salaries and specie-export drain on bank reserves.
- (10) Race between stocks of dealers, and supplies of producers, i.e., between consumers' income and outlay with accumulations of cash-balances and so on and on,

It would be a very instructive inquiry to compare the foregoing facts with our own experiences in this country. Unfortunately, the available material is either very meagre or defective; and the enormous labour involved sets limits to the most aspiring endeavours. A few tentative results may however be offered here:

	<i>India.</i>	} Deposits. In U. S. lag between Deposits and Prices is 3, 6 to 9 months.
	-	Industrial fluctuations, p. 265.
One Month	-Prices whole sale	} In U. S. lag between Prices and Money-Rates = 4 months. Pigou, Industrial Fluctuations, 257.
Two Months	-	
Three Months	-Exchange-Rate	
Four Months	-Cash and Liabilities Pro- portion and Bank-Rate.	
Five Months	-	
Six Months	-Purchasing Power Parity India and U. K.	

The actual correlation indexes calculated from the monthly statistics of the last ten years on which the above-given time-scale is based were as follows:

*Correlation-Indexes.*

	Concurrent.	1 months' lag.	2 months' lag.	3 months' lag.	4 months' lag.	5 months' lag.	6 months' lag.
Price and Bank-Rate.	...	...	...	+1835	+1426	...	
Exchange and Bank-Rate.	Negative	+1803	+1293	...	...	...	
Cash Proportion and Bank-Rate.	6847	-1638	...	...	...	...	
Exchange-Rate and P. P. P.	...	...	...	+1886	+2230	Negative and smaller.	

Although *a priori* considerations require a high degree of correlation, the actual figures arrived at are not very significant except in the case of cash-proportion and Bank-Rate. It may be that the limits to the use of advanced statistical methods are very narrow in the case of time series. It is necessary to mention, however, that although the comparisons made refer to changes from month to month, the statistics involved are not free from either seasonal or secular trends. An elimination of the seasonal trend from the exchange rate in the case of the last two series raised the index to .2646 and .3174 respectively. In the other case, although the secular trend is a complicating factor, it does not seem advisable to eliminate the seasonal trend also. For, in the case of India, the seasonal factor is the real operating factor in all changes. In any case it does not seem likely that the time-lag which is our immediate concern here will be in any way affected by the application of more refined methods for finding out the degrees of correlation. It may be added here that the magnitudes correlated are the absolute differences between successive items and not the deviations from any mean or trend-line. The procedure is justified by the fact that we are seeking correlation between changes over very short periods.

# INTERNATIONAL CONTROL OF PRICE-LEVELS

BY

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## **1. Need for an International Standard of Value: The Gold Standard.**

Whatever theories may be held on the causation of the Trade Cycle there is no doubt that all economically advanced countries are brought within its scope. Industrial fluctuations are not confined to any one country. They encompass all the industrial countries. Although the peculiar circumstances of a country may give its trade-cycle certain distinguishing marks the fact remains that essentially the same phenomenon is found in all countries where modern methods of production and banking are in use. The essential features of the trade-cycle are the same in all countries but the details may vary according to local or national circumstances.

The problem of the trade-cycle has produced many theories but none which has found general acceptance. The remedies proposed have kept pace with the theories but have met with only partial success. But in practically every country stress is laid on the effect of monetary policy on business activity and industrial fluctuation and it appears most likely that monetary resources will play a most important part in the solution of the trade-cycle. The Macmillan Committee though unable to say dogmatically that the present world-wide fall in prices is the consequence of monetary policy is pretty certain that perfect monetary policy concerted generally by Central Banks would have offset the decline in the



price-level. The economic depression, in the opinion of the Committee, is largely due to intractable non-monetary phenomena, but it was not altogether impossible for the monetary system to arrest the general downward trend. The Committee advises that in future the objective should be to increase the power to exercise deliberate control over the price-level with the further development of suitable machinery for regular international co-operation.

The international character of the trade-cycle calls for remedies which are international in scope. The monetary measures adumbrated by economic theorists and banking experts presuppose concerted action on the part of the great powers and their banking systems. The maintenance of purchasing power, the stabilisation of the price-level is essentially an international problem. Not only is every country subject to intermittent periods of activity and depression but also activity in one country or depression in another tends to be communicated to the neighbours through the channels of international finance and inter-regional commerce. It is not merely that a particular country is affected but practically the whole economic world is affected more or less simultaneously.

Naturally the problem of maintaining purchasing power develops into a world problem. It is not denied that any one country acting alone and on its own initiative is capable of controlling its price-level. But it can do so only within certain limits, for there is at least one important respect in which a country with its unaided efforts is not likely to achieve complete stability in its monetary system. If the country in question takes steps to maintain purchasing power when, for example, the world prices are falling it will surely injure its export trade and if the difference between domestic prices and international prices is persisted in for long the country is liable to lose gold in large quantities. Even though the country may succeed for a long time in maintaining purchasing power it will do so at the cost of its external and foreign market,

for under the assumption of trade depression, it will have to reckon with the diminished demand from the countries in question.

Maintaining purchasing power is, therefore, international in scope and any remedies suggested for the control of price-levels must be capable of international application.

All schemes tending to stability of purchasing power presuppose the knowledge of a technique to measure variations in price-levels. The method of the index numbers which is supposed to reflect changes in commodity prices if practised without discrimination as between the monetary and non-monetary causes of changes in the price-level may easily lead to the adoption of an unsound policy in the matter of price-regulation. The behaviour of the price system is complicated in the extreme and comes near to eluding analysis. The cycles which are discernable in the movements of a general price-index are the resultant of widely different movements in prices of thousands of individual commodities. Some prices do not conform to the cycle at all and those that conform—roughly 70 per cent of the prices according to the statistical study of ten periods of industrial fluctuations by F. C. Mills—differ among themselves in respect of the timing of revival and recession and also in the duration and volume of the cyclical range.<sup>1</sup> Cycles in commodity prices emerge as broad tendencies in a multiplicity of fluctuations and movements. These wide diversities in the behaviour of prices due to a host of causes make the task of those whose interest lies in changes in the purchasing power of the monetary unit complicated. Their object is to discover a central tendency and to trace the effects of a single factor, viz., money, in the many different types of price-behaviour.

The whole tendency in modern times is towards international standards and international systems. The metric system, the Latin Alphabet, the railway gauges are so many illustrations of

<sup>1</sup> Mills, *Behaviour of Prices*, pp. 434—39.

the tendency. One would naturally include that similar considerations would lead mankind to adopt an universal standard of value. If nothing else, economic benefit and business ethics would dictate such a course of action.

But an international standard for money will have to contend with a serious difficulty arising from differences in the purchasing power of the standard unit of currency in different countries. The standard may be uniform, yet the purchasing power of the money may not be the same in India as in England. Over against this objection we must set the conveniences and facilities secured to foreign trade through the stability and fixity in the foreign exchanges. In the specific case of foreign lending the advantages of a fixed exchange and rigid standard cannot be over-estimated. The contracts between borrowers and lenders in different countries cover different periods of time and an element of doubt or uncertainty introduced into the transaction by an unstable and fluctuating exchange will have a detrimental effect on the mobility of capital. There is no question that a high degree of mobility in international loan operations is desirable. It is the strongest argument for a fixed rate of exchange, that is, for an international standard of value.

The International Standard in the last resort is bound to be based on the prices of the principal commodities, preferably raw materials, that form the bulk of world commerce, weights being attached to them according to the money value of the total output of these commodities. A forward step in this direction has already been taken by the Economic and Financial Section of the League of Nations which publishes a Production Index based on 62 commodities.<sup>2</sup>

The lack of a stable unit of value during and after the war and the consequent insecurity and uncertainty that led to

<sup>2</sup> Memorandum of Production and Trade, 1923—1930.

economic and social disorders convinced the world more than ever that to prevent inflation and stabilise currency the paper standard should be replaced by the gold standard. The Financial Commission at the Genoa Conference in 1922 recommended the adoption of gold as the only common standard available for the various countries at the present stage of civilization. The Financial Commission was no doubt aware that it is theoretically possible to maintain the value of notes by means of stringent restriction of issues and by linking up the volume of currency with price-levels as shown in index-numbers. But the havoc wrought by inflation was so great that it seemed very indiscreet to rely upon merely human agency to maintain a stable level of prices. As Kisch and Elkin point out, "After consideration of all alternatives the consensus of financial opinion has reaffirmed the pre-war conclusions, arrived at after a series of experiments and failures, that in present conditions gold is still the least unsatisfactory standard of value and that the surest method of preserving stability in the purchasing power of money is to base currencies on gold."<sup>3</sup>

The choice of gold as a standard of value is the result of a search for a medium of exchange which would be both durable in point of time and stable in point of value. Money has a history of several thousand years. By stages in evolution Gold has come to be the universally acceptable form of money. Says Hawtrey, "The nineteenth century saw what was perhaps the most remarkable and far-reaching of all changes of standard, the almost universal adoption of the gold standard."<sup>4</sup>

The grounds on which the universal acceptability of the gold standard rests may be briefly examined. It is alleged on behalf of gold that it has been instrumental in maintaining stability of purchasing power for about fifty years before the war.

<sup>3</sup> Kisch and Elkin, *Central Banks*, p. 3.

<sup>4</sup> Hawtrey, *Currency and Credit*, p. 347.

That the level of prices comparatively speaking was steady admits of statistical proof and has been conceded by expert opinion. But what is not so easily admitted is the part played by gold in bringing about this stability, for it has been pointed out that in the first place, the new supplies of gold synchronised with increased demand which was a result of the adoption of the gold standard by the European countries and secondly, the regime of gold was supplemented by that of the Representative Money thereby economising the use of gold and steadying its effect upon the price-levels. Making allowances for these factors there is an important characteristic which makes gold an automatically stable standard, viz., that the annual addition to the gold supply is but a small fraction of the existing gold stock.

It is also agreed on behalf of gold that it makes for the essential soundness and dependability of the currency systems. It limits the power of the Central Bank over the Central Government as the case may be to unduly interfere with the money supplies. The gold standard which is international acts as an automatic check to any artificial manipulation of the price-level. There is much force in the argument. The currency history of many countries shows that the gold standard though by no means an ideal standard guarantees a certain measure of protection to the common folk and provides a permanent basis for contracts for the business people. As Hawtrey says, "The foundation of the gold standard is the tying of the value of the monetary unit to the value of gold by the fixing of the price of gold. Inasmuch as gold is a commodity with a world market it has a world value, and therefore the gold standard gives a world value to the monetary unit itself<sup>5</sup>." A world value or a world price for gold exists because the different monetary units are related together by the foreign exchange market.

<sup>5</sup> Hawtrey, *Gold Standard in Theory and Practice*, p. 31.

## 2. Demand, Supply and Distribution of Gold.

If gold were to supply the basis of the international standard we would have to make sure that the supply of gold, present as well as future, is sufficient to meet the world's demand. The fluctuations in the purchasing power of gold may be due to several causes, one of which is the disequilibrium between gold production and the normal increase of industry and trade. The problem of the output of gold is really one of the long-term trend and not of short-term price fluctuations although the influence of the latter over the former in intensifying a downward trend or heightening an upward trend cannot be gainsaid. The question whether the prospective supply of gold is likely to prove sufficient to meet the probable monetary demand in the future was thoroughly examined by the Gold Delegation of the Financial Committee of the League of Nations. Their findings are of great importance to the currency authorities charged with the management of the gold standard and the maintenance of the purchasing power. It is evident that the currency authorities must be assured of a stock of gold adequate to support the structure of credit necessary to maintain a long-term level trend of prices.

On the side of supply both the official and non-official estimates predict that in the course of the next ten years there will be a decline in gold production.<sup>6</sup> The present output amounts to about \$400 million per annum which is likely to rise slightly during the next three or four years but thereafter the supply of new gold will become positively inadequate. The production will sink to \$314 million by 1940. More than half the world's annual gold output comes from Transvaal and the gradual exhaustion of these mines is expected to lead to a decline in gold supply which can hardly be made good by mines in Canada and Russia. Most of the

<sup>6</sup> Kitchen's Estimates, Review of Economic Statistics, May 1929; Strakosch, Supplement to the Economist, July 1930; Interim Report of Gold Delegation, Annex. X, Supply of Gold by Cassel.

estimates of output were made before the recent sudden fall in prices but that would make comparatively little difference to the production of the precious metal, although the low level of wholesale prices, were it to persist, the new gold would meet the world's demand for an appreciably longer time than was reckoned by Kitchin, Strakosch and Cassel.

Almost the whole supply of gold is taken either for non-monetary purposes such as industrial use and ornaments and hoardings by the Eastern peoples or for monetary purposes. The Gold Delegation estimates the total demand for non-monetary purposes at about \$200 million per annum out of a total of \$400 millions and the balance is available for monetary purposes. If production falls off in the future and if the non-monetary uses for gold remain steady then the share available for monetary purposes will diminish. There is no evidence, says the Delegation Report, that gold flows to any large extent from non-monetary sources to monetary resources except during times of war.

Over against the supply there is the demand for monetary gold which can be estimated by the average cover which is legally required and which in practice is maintained against the total amount of notes and the sight liabilities of Central Banks. From the statistical material collected by the Gold Delegation it is seen that the minimum legal requirements amount to from 29—34 per cent while the actual cover, both in gold and gold exchange, is put at 40 per cent. On the basis of these estimates the total gold stock at present available would only just suffice for the currency needs of the world. But the demand for currency will tend to increase as production and trade expand. The most general estimate of the normal rate of growth in production and trade is about 3 per cent per annum.<sup>7</sup> It is obvious that in the absence of any measures to economise its use an increase in total gold stocks at

<sup>7</sup> Carl Synder, *Business Cycles and Measurements*, p. 23. Interim Report, Gold Delegation, p. 15, and also Annex. X, by Cassel, and XI by Kitchin.

the rate of about 3 per cent per annum is required to maintain stable prices. The Gold Delegation has shown that at the very conservative estimate that only 33 per cent will be kept against notes and sight liabilities and the normal rate of growth in industry and trade and hence in notes and sight liabilities will be only 2 per cent per annum the supply of new gold available for monetary purposes will be inadequate by 1937. But on the most likely assumption that a reserve of 40 per cent is wanted and that the rate of growth of demand is 3 per cent per annum there will be a shortage of monetary gold by at least 1934. On account of the present all-round decline in prices the demand for gold may receive a temporary check but as soon as business activity revives the insufficiency of gold will make itself felt. A serious situation may develop if along with trade revival the gold standard countries endeavour to put gold into circulation or if countries like India and China adopt a gold standard with or without gold currency.

Apart from changes in currency practice and banking legislation the deficiency in the prospective supplies of gold can be overcome to a very great extent by an equitable distribution of existing gold stocks. We have to consider what surplus stocks exist and how they could be utilised to alleviate the situation at present and in the near future. The world's stock of monetary gold is estimated \$10,900 millions. The really significant factor in the present situation is the fact that more than 90 per cent of the monetary gold is now held by Central Banks and Governments. And the distribution of this sum between different countries is exceedingly uneven and bears no relation to the volume of their economic activities, e.g., United Kingdom has about 7 per cent, France 16 and U. S. A. 35. Thus more than half of the total supply of monetary gold is in the United States and France.

The problem of the immediate future is the re-distribution of the gold now concentrated in relatively a small number of countries. On the broad assumption that about 45 per cent gold



cover has to be kept against notes and liabilities there is a surplus of \$1,000 millions located with a few countries of the world, a surplus which roughly equals the amount of new gold likely to become available during the next five years.<sup>8</sup> The lock-up of these surplus amounts amounts to a sterilisation of gold which would otherwise be available for stabilising the purchasing power of those countries now starved of their legitimate supplies of gold. An effective distribution of gold will become pressing as the supplies of new gold begin to diminish.

A discussion of the adequacy of the world's gold supply presupposes a purpose for which the gold supply should be adequate. The purpose is to support the general level of prices at a constant height. The gold supply is considered abundant or insufficient according as it causes a rise or a fall in the general level of prices. In the circumstances in which the world finds itself, viz., a prospective diminution in gold supply, the trend of prices in the future is not a matter to be left to the action of unrestricted economic forces.

### 3. "Management" of the Gold Standard.

The adequacy of gold to serve as the basis of credit depends not only on the amount of gold available for monetary purposes but also upon the manner in which it is divided between the various countries. The distribution of gold is a major factor influencing the price-level and the purchasing power of money.

It is necessary to recount that in recent years there has been a maldistribution of the gold stocks. Non-monetary factors have been chiefly responsible for the excessive concentration in some countries and for scarcity in others. These factors have all sprung from the political and economic conditions of the last fifteen years such as the disruption of normal trade relations, sudden and violent changes in economic policy, restrictions of the free flow of capital,

<sup>8</sup> Interim Report, Gold Delegation, p. 17.

endeavour on the part of some countries to maintain a level of prices out of tune with the rest of the world and lack of confidence in the financial stability of several countries. Monetary factors have also been at work. And opinions differ concerning the relative importance of the monetary and non monetary factors and concerning the extent to which an appropriate monetary policy would have controlled the situation and made it approach the normal. Under these conditions it became impossible for the gold standard to function, that is, to bring about the necessary adjustments through the movements of gold and the automatic operation of the exchanges. When the general economic and political situation is stable as it was in pre-war times, the distribution of gold depends mainly on the monetary policy pursued and on a strict observance of the principles inherent in the gold standard.

The normal features of the gold standard in its simplest form were free circulation of gold coin as full legal tender, the unconditional conversion of gold into coin at a fixed price at the mint and the unrestricted import and export of gold. The movement of gold from one country to another would produce a change in the quantity of money which in its turn would produce a change in the price-level.<sup>9</sup> The immediate cause of the gold movements would be an excess of exports over imports just as its ultimate effect is to bring also a new equilibrium of values. The influence of gold movements was, therefore, considered automatic and reciprocal.

The gold standard system has undergone a material change in recent years.<sup>10</sup> The meaning and scope, limitations and interpretation of the gold standard are not the same as they were before the war. Currency and banking legislation has been changed in every country and the unwritten laws which also

<sup>9</sup> Phillips, *Bank Credit*, Ch. III, *Philosophy of Credit*.

<sup>10</sup> Einzig, *International Gold Movements*, pp. 68—81.

play an important part in the application of monetary systems are yet in the process of formation. It is but natural that after the greatest financial upheaval in history the readjustment of monetary conditions should be slow and halting. The countries did not wait until production and trade had found their new level and budgets, debts and the capital markets and foreign balances had become normal. Between 1925—28 they took a bold step and restored the gold standard. The conditions have been abnormal. A number of forces, monetary as well as non-monetary, have affected the efficient working of the gold standard ; in fact, they have necessitated certain important changes in the mechanism of the gold standard.<sup>11</sup>

The most conspicuous change is the withdrawal of coin from circulation and the concentration of gold in the vaults of the Central Bank. Thereby a great economy in the use of gold has been secured. All additions to the gold supply simply go to form part of the reserves of the Central Bank instead of being drawn into circulation. The Central Bank with the monopoly of the gold reserves has a complete command of the monetary situation and also enhanced power to deal with the credit structure. The disturbing factor of gold in circulation and in private hands has been removed.

The Central Banks have in consequence of the withdrawal of coins from circulation been relieved of their obligation to convert notes into gold coin, but they are required to convert them into gold bullion or foreign exchange or into the one or the other at their option. Conversion into gold bullion instead of into gold coin is a real economy as the use of gold coin makes a special demand upon the gold reserves which are held to meet any sudden requirements of the community for legal tender money. But the holding of foreign exchange for reserve purposes though it is an economy

<sup>11</sup> Second Interim Report of the Gold Delegation, pp. 12—14.

and a convenience for the country holding such assets may well develop into a disturbing factor. The country in which the exchange claims are held will find it necessary to augment its gold reserves. The method seriously complicates the mechanism of the international system as it interferes with the corrective action of the normal gold movements on the exchanges, especially so if the assets are held in a commercial bank at a foreign centre which diminishes the influence of the Central Bank in the foreign country to regulate the basis of credit. Under these circumstances the functioning of the gold standard is apt to be complicated and the task of the central banking authorities becomes difficult.

Another change of some consequence in the post-war gold standard system is the almost universal adoption of the "percentage" system which prescribes that the gold reserve shall not fall below a fixed percentage of the note issue, say, about 40 per cent. The percentage system in the case of some countries applies also to the sight liabilities of the Central Banks. Generally speaking the methods of regulating the note issues have lost their meaning at the present time because the notes have ceased to be convertible and gold coins do not circulate. And the effect of reserve provisions is simply to immobilise and lock away a large part of the gold reserve so that it can never be used while the part that can be used, viz., the portion over and above the legal minimum is so small as to hamper the Central Bank in the exercise of its credit control. The percentage method which has become most fashionable has little to recommend. On the one hand, it allows the influx of new gold to produce a disproportionate expansion of credit. On the other hand, a reduction in the reserve will lead to a drastic contraction of credit, a contingency which necessitates the maintenance of a reserve largely in excess of the prescribed minimum and which therefore involves a sterilisation or lock-up of gold. On the theory of reserve regulations Mr. J. M. Keynes comes to the conclusion that "a country now holds a

reserve in gold and foreign currency for no other purpose than as a war-chest and as a safeguard against being unduly sensitive to unexpected or temporary fluctuations in its immediate international indebtedness; that the part of the reserve which is held for the latter purpose should be at the free disposal of the Central Banks; and that its normal amount should be determined by reference to the probable magnitude, generously estimated, of the requirements it may have to meet—which are not likely to be measured by a proportion, such as 35 per cent, of that part of the note issue which it would be practicable to withdraw from circulation at short notice.”<sup>12</sup>

One of the most noticeable phenomena in the post-war money markets is the extent to which commercial banks can overcome the control of the Central Banks exercised on behalf of monetary stability. Normally the commercial banks are bound to the central institutions by the cash reserves in the form of notes or deposits which they have to maintain—the notes being issued by the Central Bank and the deposits being held by the Central Bank. In recent years owing largely to the feeling of uncertainty the quantity of liquid capital, that is, savings not yet converted into claims on fixed capital goods, has been abnormally large. The abundance of liquid capital has rendered the task of Central Banks very difficult. The international trade equilibrium is sustained by the equation between imports and exports both visible and invisible. The visible items do not admit of a large degree of manipulation in the short period, for such a result can be brought about by steps taken to restrict or stimulate a country's trade, to change the wage-levels, to influence the course of output by changes in prices all of which operate only in the long period. The invisible items, on the other hand, which consist of floating funds and the liquid capital are sensitive in the extreme

<sup>12</sup> Treatise, Vol. II, p. 278.

to fluctuations in money rates and they can be transferred from country to country with facility and rapidity. Hence in modern times the inelasticity in the volume of visible trade is accentuated while the elasticity in the volume of invisible trade has become greatly accelerated. So the gold movements are caused rather by movements of funds than by normal changes in the volume of exports and imports. What is necessary for the gold standard to function properly is a smooth flow of goods, services and securities and if there should be temporary disequilibrium the liquid capital, the short-term funds, will be moved to fill up the gap—a procedure which greatly lessens actual gold transfer. The control of the Central Banks over the member banks when there is an abundance of floating funds at their disposal is bound to be weak.

The so-called “automatic” character of the gold standard was always subject to important qualifications even in the pre-war times. But since its restoration under abnormal conditions it has definitely become a “managed” standard in the hands of the leading Central Banks. How far the “management” of the gold standard by the Central Banks will result in the maintenance of purchasing power will depend upon the degree of co-operation that they are capable of achieving.<sup>13</sup> The resolutions of the Financial Commission at the Genoa Conference had already drawn attention to the importance of continuous co-operation and frequent consultation between the various Central Banks, because such co-operation and consultation would give opportunities for co-ordinating policy and reconciling interests without at the same time hampering the freedom of the various banks. In the opinion of the Financial Commission measures of currency reform could be facilitated if the idea of concerted action between Central Banks regulating credit policy could be developed. The Gold Delegation carried the argument much further in emphasizing the necessity

<sup>13</sup> Kisch and Elkin, *Central Banks*, p. 153.

to develop new controls for the changed mechanism of the Gold Standard. If any doubt remained over at all as to the "management" of the new gold standard it has been dispelled by the findings of the Macmillan Committee. It has enumerated with great elaboration the gold standard principles applicable to the post-war conditions. It argues that though the international gold standard can under appropriate conditions enable both price stability and exchange stability to be attained simultaneously over a wide area this result is not "automatic," but is conditioned by a scrupulous observance of the "rules of the game." The attainment of the prime objectives of the international standard, viz., stability of prices and stability of exchange is feasible only if the Central Banks work together with these ends in view, that is, if they mutually agree to play the "rules of the game." It strongly deprecates action by individual Central Banks which by repercussion would imperil the stability of the price-level. The Committee then proceeds to lay down the following rules :

- (1) All gold standard countries should agree that they will not allow gold to pass into active circulation, whether in the form of coins or of gold certificates.
- (2) Central Banks should give collective consideration from time to time to the question whether it would be in the general interest that the legal requirements in force in different countries as to gold reserves should be relaxed or tightened up, and should undertake to use their influence with the Governments to secure changes along the lines indicated, so far as is compatible with their domestic situations.
- (3) Central Banks should be permitted by the laws of their respective countries to reckon balances with the Central Banks of other gold standard countries, or with the Bank for International Settlements, as the equivalent of gold for all the purposes of the law.

- (4) Central Banks should not be unduly limited in their power to expand their deposits otherwise than against a corresponding increase in their holdings of gold or the equivalent of gold. Similarly, it should lie within the power of a Central Bank to restrict the volume of its deposits otherwise than by decreasing its holdings of gold.

#### **4. Instruments of Control: Bank Rate and Open Market Policy.**

Co-operation and concerted action between Central Banks to stabilise the price-level must depend to a very great extent on the possession by each one of them of adequate powers to control its own markets. There can be no international system in the monetary world if the national members of the system are not in a position to regulate the financial activities within their own countries. It will be convenient to examine the adequacy and efficiency of the instruments of control at the disposal of the Central Banks. Broadly speaking there are two fundamental methods of credit control, viz., manipulation of bank-rate and open-market operations. There are also several supplementary devices such as moral pressure or disciplinary action directed towards member banks and investment houses particularly those engaged in floating foreign issues; variation within narrow limits of the official buying and selling prices of gold; and operations in the foreign exchange market.

The prime necessity of a Central Bank which is charged with the responsibility for the management of the currency system is to make sure that it has complete and unchallenged control over the total volume of bank money that can be created by the member banks. The amount of bank money is determined by the amount of the member banks' reserve-resources. To exercise control over bank money the Central Bank must be able to exercise control over the



resources of the member banks. And since these reserves consist mostly of cash in hand and at Central Bank (which in great part is made up of notes issued by the Central ank), Bank Deposits at the Central Bank it follows that the Central Bank will be able to control the bank money by controlling the volume of its own assets against which it has issued notes and opened deposit accounts. Briefly, the power of a Central Bank to manage the monetary system depends on its ability to vary the aggregate amounts of its assets.

What are these assets and how far can the Central Bank vary them? Apart from premises the Central Bank's assets consist of gold holdings, investments, that is, purchases of bills and securities in the open market, and advances, that is, loans made against the offer of commercial paper by the customers. Of these three kinds of assets gold is the least amenable to control as the quantity of gold in the vaults of the Central Bank is normally determined by the excess of the nation's claims on foreigners over the foreign claims on the nationals. The Central Bank, however, is not entirely at the mercy of the international balance for its reserves of gold, since it can influence the international balance to considerable degree through the manipulation of the "Bank rate." The investments are entirely within the control of the Central Bank. It is free to purchase or sell bills and securities and such action on its part is said to be dictated by "open market policy." Similarly, the amount of the advances is capable of at least partial regulation by means of variations in the "Bank rate," for variations in the "bank rate" have the effect of raising or lowering the terms on which the Central Bank makes advances to the member banks. In sum, the Central Bank asserts its authority over the member banks and attempts to guide their conduct by the "bank rate," changes in which exert an influence over the gold reserves and advances, and by the "open market policy," which has for its object the regulation of the amount of investments. The exercise

of these instruments of control by the Central Banks may be considered at some length.

Since the war in certain countries the central control has been greatly increased by the adoption of open market operations, that is, buying and selling of bills and securities by the Central Bank with a view to increase or decrease the cash reserves of the commercial banks.<sup>14</sup> Thus if commercial paper is sold in sufficient quantities by the Central Bank the liquid resources of the market will diminish and the power of the commercial bank to add to the volume of credit restricted. Money thus drained out of circulation involves a contraction of credit. The purchase of securities, on the other hand, puts new money into circulation which forms a possible basis for an expansion of bank credit. Through the open market policy, it is claimed, that a rise in the general level of prices can be checked or a fall in the price-level arrested. The pre-war system did not concern itself with the problem of maintaining purchasing power; that was left to the working of the "automatic" gold standard but in the post-war system reliance is placed on "management" of the gold standard. The open-market policy is one of the instruments of "management" to stabilise price-level and ward off credit cycles.

The second instrument of control available for promoting monetary stability is the central bank rate of discount. "The bank-rate" is essentially the rate at which money can be borrowed from the central bank by the member banks. Technically it is the official published rate of the Central Bank at which it will discount three months' bills of a specified type.

Bank-rate is regarded as a means of regulating the quantity of bank money. An upward change in the rate is associated with falling prices and a downward change with rising prices. The

<sup>14</sup> Keynes, *Treatise*, Vol. II, Ch. 32, Sec. I. Burgess, *The Reserve Bank and the Money Market*, Ch. XII.

"bank-rate" acts directly on the quantity of bank credit and through it on prices. Cassel says, "The supply of means of payment, and therefore also the purchasing power of the unit of money is regulated essentially by the bank-rate."<sup>15</sup> There is no light, however, on the question whether the effect on prices is proportionate to the change in the supply of money.

The "bank-rate" is not only a means of regulating the price-level but also a means of protecting a country's gold reserves from foreign demands upon it. The point is that when the bank-rate in the country is raised to a higher level than the interest rates in foreign centres the balance of international indebtedness will be turned in favour of the country. The Central Bank thus encourages investment at home and draws balances from abroad: a type of action necessary to prevent the outflow of gold which threatens the stability of the monetary standard.

The *modus operandi* of the "bank-rate" according to Keynes differs from the part that is traditionally ascribed to it though the effects of the "bank-rate" on the price-level and the foreign balances are not denied.<sup>16</sup> The Bank-rate, says Keynes, is the instrument by which equilibrium is restored between the rates of saving and of investment which, for the time being, are at variance. To raise it is to stimulate saving and discourage investment while to lower it is to secure quite the reverse effects.

That the rate of investment could be a possible instrument of control at the disposal of the Central Bank has been dimly perceived. But whatever obscurity there might have been about the operation of this measure of national control has been swept away by Keynes. In Chapter 37 of the second volume of his 'Treatise on Money' he deals exhaustively with the problem how

<sup>15</sup> Cassel, *Theory of Social Economy*, Ch. XI.

<sup>16</sup> Keynes, *Treatise*, Vol. I, Ch. 13, Sec. II,

far the banking system can control the price-level through the rate of investment. Keynes is not exactly a pioneer in this little understood realm of banking-theory and practice.<sup>17</sup> Knapp and Bendixen, Schumpeter and Wicksell, Mises and Robertson have, each in their own way, been dealing with causes of discrepancies between the rate of saving and the rate of capital investment and tracing their effects on the price-level. Keynes has gathered these streams of thought into a system and has added to it much that is of value.

The keynote of the new thought as interpreted and elaborated by Keynes is the distinction between Savings and Investment and the influence exercised by the lack of adjustment between these two magnitudes upon the price-level. The money income of the community is divided into two parts by the recipients, one of which is spent on current consumption and the other is saved. The output of the community in goods and services is also divided into two parts one of which is sold to the consumers and the other is invested. By savings is meant any abstention from current consumption by the recipient of income, it being immaterial what use he makes of his savings. By Investment is meant the act of the entrepreneur when he makes an addition to the capital of the community, it being the function of the entrepreneur to decide what proportion of the total output should be employed in the creation of capital.

It is not to be supposed that the amount of saving is equal to the amount invested: acts of abstention from current consumption must be contrasted with acts of addition to the stock of capital. The distinction is important for a divergence between these magnitudes leads to changes in the price-level. Community's income is divided between current consumption and saving while

<sup>17</sup> T. E. Gregory, *Mysterious Craft of Banking*, Political Quarterly, June 1931. Robertson, *Banking Policy and Price-Level*.

the community's output is divided through the action of the entrepreneur between the making of current consumption-goods and additions to capital. If the expenditure on current consumption is less than the amount required to make current consumption-goods their prices fall: the consumers gain, the producers will suffer a loss. On the other hand, if the expenditure on consumption is more than the amount required to produce the consumption-goods their prices rise: the consumers lose and the producers will make a profit. There will be an excess of savings over investment in the first case, and an excess of investment over savings in the second case.

The divergence between savings and investment is caused by the rate of interest. A falling rate stimulates investment on the part of the entrepreneur while it discourages saving on the part of the income-receivers and a rising rate has a contrary effect. There is always a rate of interest at which saving would be equal to investment: it is called the "natural" rate of interest. any departure from the position of equilibrium caused by the deviation of the current rate or market rate from the natural rate will produce consequential changes on the price-level: if the producers lose they will try to reduce costs which in its turn affects the stream of income going to consumers; if they gain, they will try to expand production which has the effect of improving the purchasing power of the consumers. The presence of profits and losses is a sign of disequilibrium.

It is the business of the banking system so to act as to prevent divergencies between savings and investments. This can be done by regulating the terms of lending, that is, stimulating or deterring investment by varying the rates of interest. The object of modifying the terms of lending is to bring the market rates into line with the natural rates.

In short discrepancies between savings and investment or capital formation are attributed to discrepancies between the

'natural rate' and the 'market rate' of interest. The natural rate is the equilibrium rate which stimulates an amount of investment sufficient to absorb the current amount of savings. By offering credit at a rate below the natural rate, banks induce entrepreneurs to use more funds than the saving public is withholding from consumptive uses; by offering credit at a rate higher than the natural rate they discourage investment and cause its value to drag below the rate of saving. The former process involves inflation, the latter deflation. The doctrine therefore assumes that there is always some rate which would induce an amount of investment just equal to the amount of saving and *vice versa* without evoking either an increase or decrease in the circulation of money. The test as to whether or not such equilibrium is being preserved can always be found in the stability or instability of the price-level of output as a whole.

There are short-term rates of interest and long-term rates of interest. The currency authority will be exerting its influence mainly over the short-term rates and through them on the investment in working capital, but not on the long-term rates which determine investment in fixed capital. But it has been proved both by charts as well as on theoretical grounds that the influence of the short-term rate over the long-term rate is very great.<sup>18</sup> All the important movements in short-term rates are found to be reflected in bond yields. Apart from practical experience, this must be so because there are a number of individuals as well as financial institutions that vary from time to time the proportionate division of their assets between long-term and short-term securities according to their yield: they move from short-dated into long-dated securities and *vice-versa* in response to changes in their returns in order to maintain the expected or the established level of income. Says Riefler, "Through their own purchases and sales of invest-

<sup>18</sup> Keynes, Treatise, Vol. II, pp. 353-356.

ments commercial banks have exercised a marked pressure on the market for bonds and contributed to a considerable extent to the agreement in relative movements between yields and short-term money rates.<sup>19</sup> It is then safe to infer that the long-term market rate of interest can be influenced to a certain extent in the desired direction by regulating the short-term rate.

The crux of the whole matter is that the banking system can control the price-level by controlling the rate of investment, that is, by regulating the terms on which money is supplied. There has so far been no systematic attempt at a scientific regulation of general prices through the control of investment. But doubts have been expressed by practical bankers like Governor Strong and Dr. Stewart who, for example, in their evidence before the Stabilisation Committee of the United States deprecated the idea that the Federal Reserve System could promote a stable price-level for commodities in general—that “the Federal Reserve System has the power to raise or lower the price-level by some automatic method, by some mathematical formula.”<sup>20</sup>

Their arguments may be briefly outlined. They are not in sympathy with the general tendency to look at the price-level as though it operated up and down whenever a dose of credit was injected into it or extracted from it. To them the problem is not so simple as a self-acting machine. Suppose a decline in the wholesale price-level is accompanied by a rise in speculation on the stock exchange. To lower the interest rate and enlarge credit supplies would certainly correct the prices of the wholesale commodities but the consequences on speculation may turn out to be disastrous. Further, if there is an overstock of goods beyond what the trade will consume the introduction of extra credit will

<sup>19</sup> Riefler, *Money Rates and Money Markets in the United States*, p. 119.

<sup>20</sup> Report of the Stabilisation Committee, U. S. A., Governor Strong's Evidence, p. 295.

not act as a corrective until the surplus is worked off. So also if a severe decline in the values of commodities that are determined by world causes is to be offset by cheap money then the prices of such commodities will not be affected but the prices of purely domestic commodities would be inflated. Yet another difficulty inherent in the power to regulate the price-level is the conflicting interests between producers who demand high prices and consumers who demand low prices. Rising prices or declining prices are, according to Governor Strong and Dr. Stewart, but readjustments to take care of the mistakes made previously, mistakes which cannot be overcome by contraction and extension of credit. It seems to be a general assumption that the desirable price-level always is one that does not move upward or downward and that there can be no credit inflation unless the general level of commodity prices rises and no credit deflation unless the general level sinks. On the contrary, the situation in many countries distinctly shows that prices which move downward may be inflated just as much as prices which move upward in that they have too much credit in them. Similarly, there may be a pronounced inflow of gold as in U.S.A. and yet a falling price-level, because the prices of imported commodities are fixed largely by world conditions in which there is a marked scarcity of gold : liquidating tendencies abroad cannot be offset by easy credit at home. As H. L. Reed arguing on the same lines points out, in face of powerful price depressing forces such as technological improvements, economy-producing inventions, abundant harvests, revolution in selling methods prices were kept up in U. S. A. by the artificial encouragement of cheap credit and the country reaped the consequences of failing to permit prices to move downward in full sympathy with the various depressing forces whose influence was temporarily countered by abundant credit.<sup>21</sup>

<sup>21</sup> H. L. Reed, *Quarterly Journal of Economics*, February 1931, p. 363.



Representative banking opinion of England is just as sceptical as that of America about the power of the central bank to control the price-level.<sup>22</sup> Thus Mr. Goodenough believes that the central banks can do "very little" to put matters right. He says, "Before the war the gold standard worked more or less automatically whereas to-day there is a danger of its becoming largely a matter of management. . . . There has, I think, been a considerable change of view in regard to these theories, and I have little doubt that it is safer to rely upon the flexibility which free markets would afford than to aim at a more or less rigid control of credit and of human activity and endeavour." McKenna also disputes the claim of the central bank to exercise complete control over the price-level. He says that two of the four factors which govern the price-level, viz., changes in the bank-rate and purchase and sale of gold or securities are under the control of the central bank. The belief that a central bank could make itself master of the price-level arose from concentration on these two single factors only. But there are two further monetary factors over which no definite control can be exercised by the central bank although it would be too much to say that it has no influence on them. The first of these is the rate at which money circulates : the velocity of turnover is strongly affected by public sentiment and business prospects which lie outside the direct control of the central bank. The second is the use to which money is put : it may be currently employed in buying goods and services or it may be employed in speculation thereby furthering or multiplying the policy of the central bank.

These are doubts expressed by persons deeply engrossed in the actual business of banking. As Keynes has pointed out, there is only one way of dispelling such doubts and that is by a conscious

<sup>22</sup> Goodenough's Address to the Shareholders of Barclay's Bank, January 1931 ; McKenna's Address to the Shareholders of the Midland Bank, January 1931.

and prolonged attempt at scientific control of the price-level. There is nothing novel in the measures which the central banks are advised to adopt. Manipulation of interest rate and open market policy are classical methods employed to restore equilibrium in the price-level. Only Keynes demands that these methods should now be applied with scientific precision and with a vigour called for by the necessity of the situation. The objections of practical bankers are rooted in the routine of the daily business. They do not flow from first principles. The abstract thinking in monetary science, refinements of theory, discovery of principles must come from those who survey the money market with academic detachment.

Keynes would lay upon the Central Bank the obligation of creating sound credit conditions. And by sound credit conditions he means those in which the market rate of investment is equal to the natural rate and the value of new investment equal to the volume of current savings. The banking system can control the price-level if it can control the rate of interest or investment making due allowance of course to non-monetary causes of instability and the consequences of adhering to an international standard.

There is, however, one limitation on the power of the monetary system to mitigate, if not avoid, booms and depressions and to keep the price-level steady. Every central bank is a member of an international system. It cannot act in isolation. To preserve the stability of the price-level it has to seek the co-operation of its fellows. Its policies must be supported by similar action on the part of the remaining members of the system. There is no hope of maintaining an investment equilibrium or of managing the standard of value in the absence of a body co-ordinating and reconciling the different policies of the different national monetary managements. Specifically the principal lending countries, the loans of which determine the market rates, may co-operate so as to avoid the disequilibrium in investments.

### 5. Inter-relations of Central Banks ; Bank for International Settlements.

An international system consists of several national systems linked together by the gold standard and each national system is made up of several member banks grouped round a central bank with a uniform currency standard. Now the power of the Central Bank to extend credits is limited by the effect of its policy on its reserves. The Central Banks are in relation to each other : the customers of one Central Bank are buying from and selling to, borrowing from and lending to, the customers of other Central Banks. The creation of bank money by a Central Bank which is tantamount to the creation of claims against itself will ultimately lead to a certain proportion of them falling into the hands of the customers of other Banks. The lending policy of the Central Banks may thus cause a flow of reserves and resources from one Bank to another.

As already seen the main effect of an international standard is to secure uniformity of behaviour in different countries : every Central Bank has to conform to what is considered as the average policy of the Central Banks as a whole. Inflation in one country will cause inflation in another country and there could be no deflation in any country which does not affect the fortunes of its neighbours. A single Central Bank cannot break away from the system and pursue a policy of rising prices or falling prices unless the Central Banks in other countries are moving more or less in the same direction. The prime advantage of such a system is that it controls adventurous action and haphazard conduct on the part of individual Banks because it ties each Bank to the general wisdom of the Central Banking community. That general wisdom must be governed by what is good for the whole and not by considerations of quantity of gold or the currency policy of the most powerful banking group. As Kisch and Elkin say, "The preservation of stable prices, in association with the

**maintenance of stable foreign exchanges is the great service which the world hopes to receive from a sound central banking policy conceived and carried out in concert between the Central Banks.**"<sup>23</sup>

The Macmillan Committee plead very eloquently for co-operative "management" of the currency system. Their suggestions are :

- (i) That Central Banks should so regulate the volume and terms of bank credit as to maintain as much stability as possible in the rate of new investment and enterprise, both at home and abroad.
- (ii) That the Central Banks should confer together at frequent intervals to decide whether the general tendency of their individual policies should be towards a relaxation or a tightening of the conditions of credit. This form of joint policy should be consistent with a full measure of autonomy for each national institution.
- (iii) Each Central Bank should undertake to do its best to avoid the importation of unwanted and unnecessary gold merely as a result of leaving natural forces to work themselves out unchecked (e.g., repercussions abroad of a contraction of credit to meet domestic needs might be mitigated by the Central Bank in question increasing its own foreign short-term assets).
- (iv) Central Banks should consider the rate of long-term investment as well as short-term investment as falling within their purview, and should take whatever steps may lie within their power and are suited to their local circumstances to counteract any tendency which their own nationals may show either to keep their investible resources excessively liquid or to undertake excessive long-term commitments.

<sup>23</sup> Kisch and Elkin, *Central Banks*, p. 149.

In March 1929 the Committee of Experts on Reparations announced their decision to establish an International Bank. The world was taken by surprise and expert opinion was sharply divided between adherents of the scheme who were impressed with its immense possibilities and opponents of the scheme who were equally impressed with its great dangers. The International Bank has not been in operation sufficiently long to lend unqualified support to either of these contentions but the question how far it is equipped to regulate the world prices and to control the international price-level may be reasoned out from the Report of the Young Committee and the statutes of the Bank.

The idea of co-operation among the Central Banks is not new. Isolated attempts at co-operation are found even in the pre-war times, e. g., assistance rendered by the Bank of France to the Bank of England during the Baring crisis. During the war there was some co-operation between the central banks of the Allies and between Germany and the belligerents on her side. After the war a systematic movement began with a view to stabilise currencies and transfer reparation payments and also to prevent a scramble for gold by central banks. Very often the co-operation between banks for these purposes was sponsored by the League of Nations, e.g., the Reconstruction Loan to the Austrian Bank. The stabilisation of the franc, the lira, the zloty and drachma was rendered possible through the credits granted by the central banks to one another.

So the creation of the International Bank merely emphasized the tendency already at work for the mutual assistance of the various banking systems. Before the Bank came into existence there was no central organization to co-ordinate the activities of the group of central banks that met from time to time to deal with specific questions as they arose, and there was no agency constituted by the mutual assent of the central banks which would enforce the due observance of rules and conventions regarding the purchase of

gold and the withdrawal of assets. The function of the Bank is to systematise the co-operation of central banks which has been in existence for some time and to develop the possibilities of such co-operation.

The Bank, it has been alleged, will be in a position to control the international level of prices by regulating the amount of its credit to the central banks.<sup>24</sup> It is certainly desirable that the power of influencing the tendency of the price-level should rest with an international organization rather than with national associations like the Federal Reserve System and the Bank of France. A central bank which by dint of its gold accumulations acquires the ability to determine the tendency of world prices has to weigh national interests against international considerations and there is no guarantee that the latter may not be sacrificed for the former. It is the best way out of the difficulty to hand over the power and responsibility of influencing world prices to an international organ, which though connected closely with all the central banks, is yet above them and can take a view of the world situation unaffected by purely local or national interests. The exercise of the power to modify the international price-level is particularly apposite at the present time, as the real burden of the reparations, public debts and private obligations tends to increase with the falling trend of prices. It is not to be understood that the Bank's role as the principal authority to regulate the world price-level is to be used indiscriminately. For example, the fall of prices in the world may be due to natural causes such as over-production in which case it would be disastrous for the Bank to raise the price-level by credit expansion. An intervention on the part of the Bank will be justifiable only when the changes in price-level are due to monetary causes such as a scramble for gold, inadequacy of gold or maldistribution of gold. The Bank can arrange a

<sup>24</sup> *Einzig*, Bank for International Settlements, Ch. XII.

systematic distribution of gold or it can offset the contraction of credit caused by an undue concentration of gold in one or two countries by an expansion of credit or again the Bank can enable central banks to make a full use of their gold reserves by making it unnecessary to accumulate a safety margin over the legal reserves.

The function of the re-discount rates of the Bank is not merely to adjust the lending rates to changing circumstances or to strike a balance between the discount rates at various centres.<sup>25</sup> The Bank should not merely follow the international trend. It must, when occasion demands, influence the direction and determine the course of the international trend. The Bank-rate need not be the inevitable result of the general tendencies at work in the money markets, it may as well be the cause of those tendencies. It must assume leadership through the control it can exercise on the international price-level. And in this sense, as Einzig points out, there may be an approximation to world bank-rate which is not exactly a single figure but a scale of figures applied in different cases at a given moment. The control over the international price-level must be exercised with the greatest amount of financial wisdom, for the system lacks the power of automatic correction of the disturbing factors that is possessed by a central bank under the gold standard.

One of objects of the Bank is to reduce unnecessary gold shipments. The Bank is authorised to accept from central banks gold which is located with them and which need not be removed to the international headquarters and to deposit its own gold with central banks whenever convenient. Thus gold is transferred from the Bank of England to the Bank of France not by actual shipment but by means of book adjustments in the Bank for International Settlements.

It is obvious that the activity of the gold clearing system which

<sup>25</sup> Einzig, Bank for International Settlements, Ch. X.

is contemplated under the scheme will reduce the physical movement of gold from one country to another to a minimum. But the physical reduction of gold movements will not be accompanied by reductions in the fluctuations of gold reserves and in the unsettling influence of changes in reserves on the foreign exchanges and the price-levels. The tendencies that produce fluctuating reserves will continue to operate in spite of greatly reduced physical displacement of gold. It is not the task of the Bank to interfere with normal exchange movements and it is well advised to keep its hands off the automatic machinery of the gold standard devised to correct exchange instability. The appreciation or depreciation of the exchanges, the movements of the exchanges beyond gold points must be checked by gold transactions though the consequent changes in the gold reserves were to take place by book entries instead of actual shipments of specie. For the Bank to monopolise gold shipments would be equivalent to the complete loss of the significance of the gold points and the central banks and the money markets would thereby lose a valuable index and a timely warning. The normal gold movements result in a marked rise or fall in the rates of interest, thus setting those forces in motion which tend to correct the influences responsible for the excess of imports or exports as the case may be. The Bank must not interfere with the automatic working of gold movements through exchange transactions : it must not interfere with normal fluctuations within the limits of the gold points. But it can assist central banks in their task of resisting abnormal fluctuations in their exchanges.





# VARIANCE OF IMPERIAL BANK ADVANCES

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## SUMMARY

In this paper, Dr. R. A. Fisher's method of analysis of variance has been applied to the monthly averages of the advances made by the Imperial Bank of India during the years 1921 to 1930. The relative importance of seasonal fluctuations and yearly changes has been estimated. The current views about the secular trend have been examined and a rational method of curve-fitting elaborated with a few illustrations.

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1. The advances made by the Imperial Bank of India are shown in the balance sheet under four items: (a) Loans, (b) Cash Credits, (c) Inland Bills Discounted and Purchased, and (d) Foreign Bills Discounted and Purchased. Weekly figures for each of these items are available since January 28, 1921, when the first balance sheet was published. For the purpose of the present study, balance sheets up to December 26, 1930, have been utilised.

2. The period under review was not economically stable. In the first place, the course of prices in India was unsteady. The index number of wholesale prices in Calcutta remained fairly uniform with occasional declines during the first four years, but there was fluctuation in individual prices. The index declined heavily during the next two years. The fall was arrested for one year, became perceptible during the two following years, but was catastrophic since September, 1929. There was similar instability

in the exchange rate, in the prices of fixed-interest investments and of industrial shares. The rates of discount, and of interest on short-term as well as long-term loans all fluctuated. Other indices of economic activity such as bank deposits and bank clearings were equally unsteady. In a period of such unsettlement, it may become impossible to isolate the seasonal fluctuations, the secular trend and the cyclic disturbances. In the next place, a period of ten years may not contain sufficient number of replications to reveal long-period features such as trends and cycles. It behoves us, therefore, not to start with any assumptions but to leave the figures to speak for themselves.

3. As stated above, weekly figures of four different items of advances made by the Imperial Bank of India are available. But as this paper is written more with the object of illustrating a method of analysis of time series rather than of giving a detailed analysis of the advances themselves, the four different figures for Loans, Cash Credits, Inland Bills and Foreign Bills have been added together week by week, and their monthly averages taken as in the table below. Thus each figure represents 16 or 20 items according as there were four or five balance sheets during a month.<sup>1</sup> This is necessary, for sometimes the Imperial Bank of India thinks it advisable to change one form of advance into another to suit its own purpose. For instance, when emergency currency has to be obtained from the Controller of Currency, cash credits have often to be converted into hundis. This has a theoretical advantage also. For even if the original series is not normal, a derived series of composite quantities like this may approach "normalcy." To simplify matters, the figures are shown below up to the nearest crore of rupees :

<sup>1</sup> January 1921, was an exception, the Bank having commenced business on January 21, 1921, and there having been only one balance sheet during that month,

TABLE I—IMPERIAL BANK ADVANCES  
(Rs. Crores)

Months	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
January	48	51	55	70	61	56	50	60	43	46
February	47	52	55	80	70	57	57	62	62	47
March	48	53	56	86	75	59	60	61	58	48
April	49	52	57	84	75	60	56	62	58	53
May	51	50	57	79	72	49	53	61	50	51
June	49	47	52	72	65	50	49	51	46	48
July	48	45	55	67	51	43	44	44	42	47
August	45	46	52	66	47	39	39	43	37	51
September	48	48	49	63	44	38	40	41	35	49
October	54	48	51	58	48	38	40	45	35	46
November	55	47	55	56	51	39	42	49	34	44
December	56	49	64	56	52	41	53	56	37	43

4. In the following table, a further simplification is effected by considering the deviations from a fixed level throughout, viz., Rs. 50 crores.

TABLE II—DEVIATIONS OF IMPERIAL BANK ADVANCES FROM RS. 50 CRORES.  
(In Rs. Crores.)

Months	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
January	-	+	-	+	-	+	-	+	-	+	+
February	2	1	5	20	11	6	7	10	7	4	40
March	3	2	5	30	20	7	10	12	12	3	89
April	2	3	6	36	25	9	10	11	8	2	104
May	1	2	7	34	25	10	6	12	8	3	106
June	1	3	7	29	22	1	3	11	4	1	73
July	1	3	2	22	15	1	1	11	3	2	29
August	5	4	5	17	1	7	6	6	8	3	14
September	2	2	2	16	11	11	11	7	13	1	35
October	4	2	1	13	6	12	10	9	15	4	45
November	5	3	5	8	2	12	10	5	15	4	37
December	6	1	14	6	1	11	8	1	16	6	28
Total	18	20	1	237	11	63	46	28	91	32	159
	-2	-12	+58	+237	+111	-31	-17	+35	-63	-27	+289

5. An automatic check is provided in the above table, for the grand total of deviations, *viz.*, +289 may be derived from the sub-totals of either of the years 1921 to 1930, or of the months January to December. The arithmetic means for the different years may be easily found from the series of the sub-totals—2, —12 . . . , —27, and the arithmetic means for the different months from the other series of sub-totals 40, 89, . . . —28, +7. Thus the mean for the year  $1926 = 50 - 31 \div 12$  (there being 12 figures for each year)  $= 47.4$  approximately; the mean for June  $= 50 + 29 \div 10$  (there being 10 figures for each month)  $= 52.9$ . THE GENERAL MEAN  $= 50 + 289 \div (12 \times 10) = 52.4$ . In any case, and even without these calculations, the totals of deviations for the years 1921, 1922 . . . 1930 and for the months January, February, . . . December form an interesting study by themselves. For instance, on reference to column 12 in Table II, it is evident that during the five months July to November, the deviations are all negative, the minimum (—45) being reached during September; the deviations during the remaining seven months December to June are all positive, the maximum (+106) being reached during April. This points to strongly marked seasons, but does not tell us whether the seasonal fluctuations may be isolated, nor what is their importance considered in relation to other changes, such as secular trends and cyclic disturbances.

6. To answer these two questions as also others arising out of them, the method used by Dr. R. A. Fisher mainly for analysing agricultural data may be applied. The writer is indebted to Prof. P. C. Mahalanobis, M. A. (Cantab.), I.E.S., Senior Professor of Physics, Presidency College, Calcutta, for this suggestion and for valuable assistance throughout this investigation. Roughly, the method may be described as the analysis of variance (that is, fluctuation in a systematic manner, stage by stage). For this purpose, the squares of the deviations given above are necessary. These are listed in the following table :—

TABLE III—SQUARES OF DEVIATIONS OF IMPERIAL BANK ADVANCES ABOUT RS. 50 CRORES.

Months	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Total
January ...	4	1	25	400	121	36	...	100	49	16	752
February ...	9	4	25	900	400	49	49	144	144	9	1,733
March ...	4	9	36	1,296	625	81	100	121	64	4	2,340
April ...	1	4	49	1,156	625	100	36	144	64	9	2,188
May ...	1	...	49	841	484	1	9	121	...	1	1,507
June ...	1	9	4	484	225	...	1	1	16	4	745
July ...	4	25	25	289	1	49	36	36	64	9	538
August ...	25	16	4	256	9	121	121	49	169	1	771
September ...	4	4	1	169	36	144	100	81	225	1	765
October ...	16	4	1	64	4	144	100	25	225	16	599
November ...	25	9	25	36	1	121	64	1	256	36	574
December ...	36	1	196	36	4	81	9	36	169	49	617
TOTAL ...	130	86	440	5,927	2,535	927	625	859	1,445	155	13,129

7. The grand total 13,129 gives the sum of the squares of all the  $12 \times 10$  or 120 deviations from 50. The sum of the squares of these deviations from the general mean  $= 13,129 - 120$  (deviation of general mean from 50)<sup>2</sup>  $= 13,129 - 120 (289 \div 120)^2 = 13,129 - 289^2 \div 120 = 12,432.99$ . There are 120 quantities giving rise to this total variance among which 119 *independent* comparisons are possible. Thus the average variance or mean square of deviations  $= 12,432.99 \div 119 = 104.48$ . THE "STANDARD ERROR"<sup>2</sup>  $= \sqrt{104.48} = 10.2$ . The observed standard deviation of course  $= \sqrt{(12,432.99 \div 120)}$ , which is nearly the same as the standard error obtained above, the sample being as large as 120. On reference to Table I, it will be seen that there are no figures which fall below the general mean 52.4 by more than twice the standard deviation (that is, 20.4), but there are five consecutive figures from February to June 1924, which exceed the general mean by more than twice the standard deviation. This suggests that the year 1924 is an exceptional year,<sup>3</sup>—a fact also confirmed by the last line of Table III in which the sub-total for 1924, *viz.*, 5,927 is seen to be nearly half of 13,129, the grand total of all the ten years.

8. The total variance about the general mean, *viz.*, 12,432.99 may be analysed into (a) the fluctuations of ten annual averages about the general mean (which of course is also the mean of those ten annual averages); and (b) the fluctuations of the twelve monthly

<sup>2</sup> This may be called the estimated standard deviation being the best estimate of the standard deviation of the population from which the sample is taken.

<sup>3</sup> As already stated in paragraph 2, prices fell heavily during 1924 and 1925. The immediate effect of this was that traders tried to hold stocks by borrowing from banks. Thus advances tended to increase. Ultimately when the expectation of a rise in prices was not fulfilled, traders disposed of their stocks to save interest and rent, with the result that advances tended to decline. It is no wonder therefore that there were such extreme fluctuations during 1924 and also during 1925. The same phenomenon was noticeable during 1929 on a subdued scale.



figures within each individual year about the average for that particular year. The first may be called the variance between years and the second the variance within years. The table below shows the calculations.

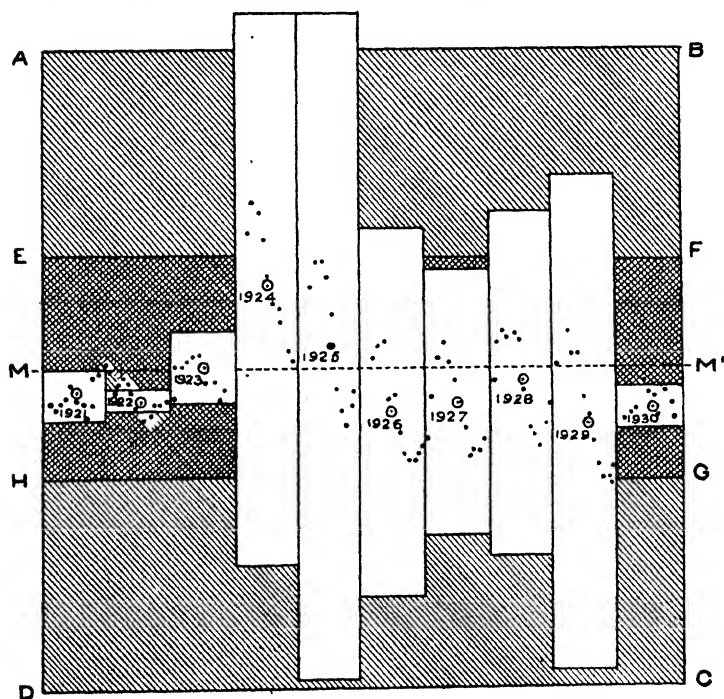
TABLE IV.—VARIANCE BETWEEN AND WITHIN YEARS OF  
IMPERIAL BANK ADVANCES.

Years.	Num- ber of items.	Deviations from 50 as given in last line of Table II.		(Deviations) 2 from 50 as given in last line of Table III.	Variance be- tween years with reference to 50.	Variance within years.
(1)	(2)	(3)		(4)	(5) = $(3)^2 \div (2)$	(6) = $(4) - (5)$
1921	12	2	+	130	33	129.67
1922	12	12	...	86	12.00	74.00
1923	12	...	58	440	280.33	159.67
1924	12	...	237	5,927	4,680.75	1,246.25
1925	12	...	111	2,535	1,026.75	1,508.25
1926	12	31	...	927	80.08	846.92
1927	12	17	...	625	24.08	600.92
1928	12	...	35	859	102.08	756.92
1929	12	63	...	1,445	330.75	1,114.25
1930	12	27	...	155	60.75	94.25
Total	120	+289		13,129	6,597.90	6,531.10

9. The first figure in column 6 of the above table, *viz.*, 129.67 represents the variance of the twelve monthly figures during 1921 in Table I about the mean of those twelve figures. Similarly, for the other items in column 6. Thus the total 6,531.10 represents the aggregate variance within the ten years. The first figure in column 5 of Table IV, *viz.*, 33 represents the dispersion of the mean for 1921 from 50 and so on. Thus the total of column 5

# VARIANCE OF IMPERIAL BANK ADVANCES.

Total variance.
  Variance between years.
  Variance within years.





*viz.*, 6,597'90 represents the aggregate dispersion of the ten annual means from 50. In order to find out their dispersion from the general mean, we have to subtract  $289^* \div 120$  or 696'01, as calculated in paragraph 5 *ante*. Thus the variance between years =  $6,597'90 - 696'01 = 5,901'89$ . The total variance 12,432'99 is of course the sum of variance within years (6,531'80) and of variance between years (5901'89). This is illustrated in the accompanying diagram in which MM' represents the level of the general mean, the ten small circles (⊙) represent the annual means for the ten years 1921 to 1930 and the dots the monthly figures of advances year by year. The rectangle ABCD represents the total variance of all the 120 figures. The rectangle EFGH represents the aggregate variance of the ten annual means about MM'. Thus the two rectangles, ABFE at the top and HGCD at the bottom, represent the aggregate variance within the ten years, —the variance within each individual year being shown separately by the ten rectangles about the ten annual means.

10. To find the average variance between years, we have to divide 5,901'89 by 9, there being nine independent comparisons or "degrees of freedom" among ten years. Similarly, for the variance within years, *viz.*, 6,531'10, there are eleven independent comparisons within twelve months in each of the ten years or 110 degrees of freedom in all, which figure may also be obtained by subtracting the 9 degrees of freedom ascribable to the variance between years from the 119 degrees of freedom pertaining to the total variance.

TABLE V.—AVERAGE VARIANCE BETWEEN AND WITHIN YEARS OF  
IMPERIAL BANK OF INDIA ADVANCES

Nature of variation	Degrees of freedom	Sum of squares	Mean square	$\frac{1}{2} \log_e$ (mean square)
(1)	(2)	(3)	(4) = (3) ÷ (2)	(5)
Total ...	119	12,432'99	104'48	
Within years ...	110	6,531'10	59'37	2'0419
Between years ...	9	5,901'89	655'76	3'2429

Difference 1'2010 =  $\pi$ .

On reference to column 4 it is seen that the average variance between years (655.76) is considerably greater than the average variance within years (59.37). In other words, the fluctuations within each year must be recognised as significantly different from the fluctuations from year to year, requiring separate studies for these two types. Thus the provisional analysis mentioned in paragraph 8 is confirmed.

11. Dr. Fisher has devised a convenient test<sup>4</sup> for finding out whether any two variances are significantly different by calculating  $z$ , which is half the difference between the natural (Napierian) logarithms of the two variances which in the present case works out to 1.2010 as shown above. On reference to the table for 1 per cent points of the distribution of  $z$  on pages 214-215 of "Statistical Methods for Research Workers" (Second edition), it is found that for  $n_1=8$  and  $n_2=60$ ,  $z$  will be equal to or exceed 0.5189 only once in hundred trials in case the two variances are identical. The observed value is 1.2010 for  $n_1=9$  and  $n_2=110$ . It is clear, therefore, that  $z=1.2010$  will occur much less frequently than once in hundred trials on the supposition that the two variances are equal. In other words, the odds are much greater than 100 to 1 that the two variances are different.

12. It is also clear that as the variance between years is the more important of the two, each year has an individual character of its own. It is, therefore, advisable to study the yearly change first. To use the current terminology, this change is made up of two items—(a) the secular trend, and (b) the cyclic disturbance. Mr. Michell in his scholarly treatise on "Business Cycles" sums up the features of the secular trend in the following words: "Lines of secular trend show the effects of causes, which, though subject to change at any moment, have influenced

<sup>4</sup> The test of course involves the usual assumption of a normal population.

an economic process in some *regular* or *regularly changing* way through periods of time *long* in comparison with business cycles." (Italics by the present writer.) This description seems to be vague and otherwise unsatisfactory, but unfortunately it cannot be improved upon with the help of our present meagre knowledge of the subject. Two distinct methods of approach have been developed. One is based on what is called the law of growth. For instance, Mr. R. B. Prescott<sup>5</sup> argues that every economic process has an initial period of experimentation, a subsequent period of growth into social fabric, a third stage during which this rate of growth is successively accelerated, becomes stationary and retarded, and a final stage when there is no further growth,—in other words, a period of economic equilibrium. He therefore seeks to represent trends by "Gompertz" or "logistic" curves. Apart from the fact that this "law" is largely speculative it cannot obviously be applied to many series, for which, however, there seem to be trends, e.g., index number of prices. Another method of approach, which is usually resorted to, hits on an empirical "law" from a study of the figures themselves. The technique is bewildering in its diversity. To quote from "Business Cycles" once again, "In the same piece of work, an investigator may fit a straight line to one series, a parabola to a second, compute three-year moving medians of a third and seven-year moving arithmetic means of a fourth, run a freehand curve through a fifth, use ratios to some other series for a sixth and devise some novel method for a seventh. He may even use two or three unlike methods of determining the trend in different sections of the same series." The fact is that all investigators of business cycles are concerned not with studying the nature of secular trends but with eliminating them so as to get at the cyclic fluctuations, which alone form their objects of study. Thus the only

<sup>5</sup> Journal of the American Statistical Association for December, 1922.

thing definite about secular trends is that they are non-periodic smooth curves. Even this has been questioned by Dr. Kurznets, who speaks of "secondary trends" intermediate between the much longer primary trends and the much shorter business cycles, and by Mr. G. van Galdern and others who write about "long waves" of about 50 years' duration,—both of these being periodic.

13. In any case, for a short series of ten years like the one under the present investigation, it is best not to start with any "law," whether with regard to the secular trend or with regard to the cyclic disturbance, but to try to represent the year-to-year variation by a suitable curve,—be it periodic or non-periodic. An experienced and skilful investigator of business cycles may pass a free-hand curve through the series of yearly means. On the other hand, a mathematician may conduct a Fourier analysis or may resort to the method of least squares. But every curve, howsoever obtained, will have to be tested for its "goodness of fit."

14. Here also there is no satisfactory or uniform test. One method is to examine the "reasonableness" of the data by projecting trend lines into the future,—a method suggested by the use of a trend as a "forecaster." This presupposes the continuance of the existing economic conditions,—a large and perhaps gratuitous assumption. For instance, if any investigation covering the years 1904 to 1925 has been properly done, we may conclude that provided the economic conditions remain fairly stable, another random sample of 25 years will differ from the present sample in a determinable manner. To locate that sample from 1902 to 1926 or from 1900 to 1924 is not the same thing as taking another random sample. Another method is to break a series into two parts and reconcile their trends. This sometimes reveals

<sup>6</sup> Michell's "Business Cycles," (1930), pp. 226—230.

unexpected difficulties. A striking illustration has been given by Mr. W. L. Crum in the the Journal of the American Statistical Association for June 1925. He points out that for the following series of figures

Years	New York Bank Clearings (in \$ 10,000,000)			
1903 ... ..	...	...	...	6,596
1904 ... ..	...	...	...	6,864
1905 ... ..	...	...	...	9,382
1906 ... ..	...	...	...	10,467
1907 ... ..	...	...	...	8,718
1908 ... ..	...	...	...	7,928
1909 ... ..	...	...	...	10,359
1910 ... ..	...	...	...	9,726
1911 ... ..	...	...	...	9,239
1912 ... ..	...	...	...	10,035
1913 ... ..	...	...	...	9,463
1914 ... ..	...	...	...	8,302

the trend line fitted by the least square method for the period 1903 to 1913 is  $y = 8,983 + 245x$  and for 1904 to 1914 is  $y = 9,055 + 83x$ , where  $x$ =number of years measured from the middle of each period. As Mr. Mitchell sums it up: "Statisticians fall back upon a visual comparison between the actual values and the trend lines within the time limits of the data. Their confidence in a fitted curve seems to be the greater the simpler is its equation, and the longer the period within which it gives a reasonable fit. But published expressions of opinion show that a fit which seems good to one man would be called poor by another." We should, however, try to eliminate the subjective element in order to place the technique of fitting on a secure and scientific foundation. How far this is possible in the present case is examined below.

15. We have ten yearly figures as given in the last line of Table II, on the basis of which we have to attempt to fit a trend line. If we depend of visual comparison, a fit must be regarded



as good or bad, according as the deviations of these yearly figures from the corresponding graduated values is small or large. This, however, overlooks the fact that each of these yearly figures is derived from twelve monthly figures which are dispersed about their mean,—that dispersion being measured by the variance within that year. The secular trend, by hypothesis, represents for any particular year an average picture of the fluctuations of twelve months constituting that year. It cannot therefore be located with greater certainty than the fluctuation from month to month within that year. It would, therefore, seem to be sufficient if the aggregate variance of yearly figures about the fitted curve should be of the same order as the aggregate variance within years as obtained above in paragraph 9. Thus any particular fit must be rejected if it is found that the aggregate variance about that curve is significantly greater than the aggregate variance within years. On the contrary, if the former is found to be significantly smaller than the latter, one may reasonably apprehend that “the data have been improved upon,”—the correspondence although close is probably fictitious.<sup>7</sup>

16. The above is illustrated in the following sections by fitting successively (a) a straight line, (b) a parabola, and (c) a cubic to the ten yearly figures by the least square method. If we measure the year  $x$  backward and forward from the end of 1925, then the graduated values of deviations in the last line of Table II are given by the equations :—

$$(a) y = 28.90 - 9.70x; (b) y = 72.95 - 9.70x - 5.34x^2;$$

$$(c) y = 72.95 - 37.4x - 5.34x^2 + 1.93x^3.$$

17. The method of calculating the variance about the straight line is shown below :

<sup>7</sup> The absurdity of such a “close” fit may be easily realised when we remember that it is always possible to pass exactly through  $n$  points a curve of the  $(n-1)$ th degree, which can, however, hardly be regarded as the trend of the  $n$  points

TABLE VI.—VARIANCE OF IMPERIAL BANK OF INDIA ADVANCES ABOUT THE STRAIGHT LINE  $y = 28.90 - 9.70x$ 

Year	No. of items	Graduated deviations from 50	Variance between graduated values about 50	Observed deviations as given in last line of Table II	Difference between observed and graduated values		Variance due to deviation from graduated values
(1)	(2)	(3)	(4) = (3) <sup>2</sup> ÷ (2)	(5)	(6) = (5) - (3)		(7) <sup>2</sup> = (6) <sup>2</sup> ÷ (2)
		-	...	-	-	+	
1921	12	72.55	439	2	74.55	...	463
1922	12	62.85	329	12	74.85	...	467
1923	12	53.15	235	...	...	4.85	2
1924	12	43.45	157	...	...	193.55	3,122
1925	12	33.75	95	...	...	77.25	497
1926	12	24.05	48	31	55.05	...	253
1927	12	14.35	17	17	31.35	...	82
1928	12	4.65	2	...	...	30.35	77
1929	12	5.05	2	63	57.95	...	280
1930	12	14.75	18	27	12.25	...	13
		19.80	...	152	306.00	306.00	...
Total	120	+289	1,342	+289	...	...	5,256

From the total of column 4, viz., 1342, the variance between graduated values about the general mean may be obtained by subtracting the correction ( $289^2 \div 120 = 696$  as calculated in paragraph 7 above. Thus the variance between graduated values about the general mean becomes 646. If to this is added 5,296, i.e., the variance due to deviation from graduated values, we get 5,902 which must of course equal the total variance between years obtained in paragraph 9 above.

18. The Table for analysis of this variance may be thus shown :—

TABLE VII—AVERAGE VARIANCE OF IMPERIAL BANK OF INDIA  
ADVANCES ABOUT THE STRAIGHT LINE  $y = 28.90 - 9.70x$

Nature of variation	Degrees of freedom	Sum of squares	Mean square
(1)	(2)	(3)	(4)
Between years ...	9	5,902	656
Between graduated values ...	1	646	646
Due to deviation from curve	8	5,256	657

Thus of the total variation 5,902 only 646 has been absorbed by the straight line and at the same time the degree of freedom has been reduced by unity. The result is that the average variance about the curve is 657 which is slightly greater than the variance about the mean, viz., 656. It is therefore clear that the graduation in this case is worse than useless.

18. The variance about a parabola may be thus exhibited :—

TABLE VII—AVERAGE VARIANCE OF IMPERIAL BANK OF INDIA  
ADVANCES ABOUT THE PARABOLA  $y=72.95-9.70x-5.34x^2$ .

Nature of variation	Degrees of freedom	Sum of squares	Mean square	$\frac{1}{2} \log_e$ (mean square)
(1)	(2)	(3)	(4)	(5)
Between years ...	9	5,902	656	...
Between graduated values	2	1,942	971	...
Due to deviation from graduated values	7	3,960	566	3.1693

$\frac{1}{2} \log_e$  (average variance within years, i.e.,

$$59.37 \text{ with 110 degrees of freedom) } \dots \frac{2.0419}{2} = 1.1274$$

If Table VIII is compared with Table VII, it will be seen that the sum of the squares of the deviations from the parabola is 3,960 in place of 5,256 obtained in the case of a straight line. At the same time the degree of freedom has become 7 in place of 8, and the average variance has been reduced to 566 in place of 657. In other words, the sum of the squares of the deviation has been reduced by about 25 per cent whereas the average variance has been diminished by only 14 per cent. In any case, even now the variance about the parabola is significantly greater than the variance within years.

19. If we now go still further and fit a cubic, the variance may be thus analysed :—

TABLE IX AVERAGE VARIANCE OF IMPERIAL BANK OF INDIA ADVANCES  
ABOUT THE CUBIC  $y = 72.95 - 37.40x - 5.34x^2 + 1.93x^3$

Nature of Variation	Degrees of freedom	Sum of squares	Mean square	$\frac{1}{2} \log_e$ (mean square)
(1)	(2)	(3)	(4)	(5)
Between years ..	9	5,902	656	...
Between graduated values	3	2,714	905	...
Due to deviation from curve	6	3,188	531	3.1374

$\frac{1}{2} \log_e$  (average variance within years, i. e., 59.37  
with 110 degrees of freedom) ... .. 2.0419

$\varepsilon = 1.0855$

Even now the deviation from the fitted curve is far too great, i.e., the graduation is still not adequate, although there is some improvement.

20. Thus it is clear that the method described above affords a rational control of the degree of approximation to be attained in fitting a curve to a series of data. The common notion of getting a "closer" agreement by going to a higher degree curve is not justifiable, although it often creates a false sense of security. The method of analysis given here may be utilised for studying not only the trend but also the seasonal fluctuations and other disturbances. But as the paper has already exceeded the allotted limit, we must refrain from further elaboration necessary to show the power of the method in full.

# A BOARD OF NATIONAL INVESTMENTS FOR INDIA

BY

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## SUMMARY

Separate institutions are existing or have been recommended for the finance of foreign trade, internal trade, industries and agriculture. But no financial organisation exists in the country to meet the capital requirements of public bodies in India, which now amount to some 45 crores of rupees annually. It is proposed that a Board of National Investments should be established in the country to take over the banking and investment functions that are now discharged by the Finance Department of the Government of India. The creation of this Board will mean a step forward in the direction of decentralisation in financial matters. It will avoid sweeping money off the money market which now occurs owing to the open market borrowing operations of the Government. Its presence will insure a better administration of all the branches of the Indian public debt. The Credit Foncier in France and Zemska Banka in Czecho-Slovakia undertake to perform some similar functions. They supply long-term funds to major industries and finance the local bodies.

### **Scope of Financial Requirements.**

"The problems of finance," says the Macmillan Committee Report, "underlie the whole field of human activities." Yet it is a most difficult problem to hammer out the right type of financial institutions for a community. The growth and type of financial institutions in a country very much depend upon the economic

structure of the society there. If we take the sphere of banking as an instance in point, we find that essentially the needs of all communities are the same, namely, the provision for long- and short-term finance of trade, industry and agriculture, and availability of capital for transport purposes and other public works. But how widely different are the institutions in different countries that meet the same requirements! Finance and financial problems are just like a living organism and its nervous system. There is some sort of scientific arrangement by which the whole organisation is regulated and controlled. If we picture to ourselves a tree representing the banking position in India, we shall find that it is something lop-sided. While there are banks for internal and foreign trade of the country, there are no institutions for short- or long-term requirements of industry and agriculture. There is no central feeding. There is no regular organisation in the country to meet the growing requirements of money for purposes for which, for good or for evil, the State in India has, by force of circumstances, become responsible. A Central Reserve Bank has been proposed, Industrial Banks have been suggested and Land Mortgage Banks have been recommended. Similarly, other institutions have been favoured to undertake exchange business. But, to my mind, no serious attention appears to have been paid to the most important requirement of the community, namely, the necessity of an institution to finance the numerous requirements of public bodies in India.

### **Over-burdened Finance Department.**

The State in India has many socialistic tendencies. It carries on many industrial and financial operations which are done elsewhere by private individuals and separate institutions. The Government has a very great responsibility upon its shoulders that it has to find funds for the construction of railways, feeding of provinces, advances to Indian States and loans to harbours,

municipal corporations and numerous other bodies and individuals. It was estimated by Sir Basil Blackett in 1924 that the loan requirements of public bodies in India—including the borrowings of the Government of India as well as the direct loans raised by provinces and local bodies—amount to some Rs. 45 crores annually. I have made computations in another way and the result is the same. The most surprising thing is that though year after year this large amount of money has to come out of the money market and savings of the community are required to flow into long-term permanent requirements of the State, all this is done without the existence of a proper institution for this purpose. Special organisations are always necessary in order to deal with the supply of savings or of borrowings of a special character, and with a view to linking up the flow of permanent savings with the demand for them for special purposes. Yet the task here in India has fallen on the shoulders of the Finance Department. In no other important country in the world is the Exchequer so overburdened with multifarious functions of a wide character. Yet the Finance Department of the Government of India is the most ill-equipped department for the purpose of efficiently discharging all those functions. If a Reserve Bank is created in this country, it will be possible to hand over to it the control of currency, exchange, reserves, balances and remittance operations. But will the Government continue to carry on the vast transactions of a banking character which they now do? The necessity for a separate organisation for the latter purpose too, therefore, appears to be very obvious. Consequently it is suggested that a Board of National Investments should be established in India.

### **A Board of National Investments.**

On an examination of the present banking and investment operations of the Government of India we find that so far as this part of the work is concerned, the Government has to perform two



important functions, namely, borrowing money on the one hand and lending it on the other. It is suggested that this work should be taken over from the Finance Department of the Government of India and entrusted to a new Board. The work of future financing of the numerous beneficiaries now helped by the Government borrowing system should also be handed over to the same institution. A separate body created only for this purpose, financial integrity of whose dealings will be guaranteed by the Government of India, will discharge these operations in a much more efficient manner than what is done at the present moment. "There are many funds, deposits, balances and reserves in India—such as the proceeds of the Postal Cash Certificates and Savings Banks, Provident Funds, Judicial and other deposits, the Famine Insurance Fund, the Railway Depreciation and Reserve Funds, the Sinking Fund contributions of the central and provincial governments, and similar other loanable moneys which now go to assist the general Ways and Means position of the Government of India. It is necessary to separate such interest-bearing funds, intended for investment, from the general Treasury balances, pool them, and entrust the work of their investment and management to the care of an independent body composed of representatives drawn from all the interests concerned. In addition to the investment of the above and other such funds, the proposed organization should arrange for such matters as the issue of direct loans, the conversion and redemption of early maturities, the distribution of loanable funds between the central and provincial governments, the purchase and sale of securities, and the creation of facilities for the sale of sterling paper in India and submit an annual report to the Treasury giving an account of its activities. The usual practice in Great Britain is to do all borrowing through the Treasury and the Bank of England, and to arrange part repayment through the National Debt Commission. But there is a great deal to be said for the

co-ordination of borrowing, reborrowing, and repayment functions. and their transfer to a separate independent body.”

### **Reasons for the Establishment of a Board.**

There are some very important points that can be urged in favour of the adoption of the course recommended above. In the first place, borrowing for the requirements of others is not essentially a governmental or administrative function. On the other hand, it unnecessarily brings the Government into the arena of controversy. Government's borrowing operations in the post-war period have been subjected to very severe public criticism. It is, therefore, only in the fitness of things that the Government should not, if it can help it, any longer remain directly responsible for such activities. The difficulty is that with such crude organisation as the Government has now got at its disposal, its financial activities in the money market have tended to become a bug-bear to all those interests that require funds for other purposes. There appears to be too much of Government borrowing and all—or almost all is concentrated at a few commercial centres where money is equally urgently needed for other operations. The most natural result of these open market operations of the Government is that commercial and industrial interests are frequently starved for money. The new Board will so operate on the market as not to unduly strain the resources of any particular section of the community or locality.

### **Splitting up of the Indian Public Debt.**

Then the question of the public debt of India has been a target of fierce and bitter attacks in the country in the last decade. I do not want to tread on the road to controversy, but so far as the present position of the public debt of the Government of India is concerned, out of a total of Rs. 1171'96 crores of interest-bearing obligations on the 31st March, 1931, as much as Rs. 937'44 or

80 per cent, were covered by the interest-bearing assets; there were cash, bullion and securities held on Treasury account to the extent of Rs. 35 crores, and only some Rs. 199'34 crores had no tangible assets against them. I am clearly of the opinion that the assets and liabilities of the investment section of the debt should be placed beyond the region of political controversy. Whether more loans are granted in the future for the construction of irrigation works, or for *tagavi* loans, or for financing cooperative societies or for occasionally helping major national industrial concerns, or the policy of spending more money on the construction of railways is continued, will depend upon the choice of the future Federal Government. The point is that these investment transactions should not be directly carried on by the State. The most important step, therefore, that the new Board will be called upon "to take will be to split up the whole of the Indian Public Debt among the railways, provinces, native states, harbours, municipal corporations and other borrowing bodies that now bank with the Government of India, to fix up periods for the redemption of their debts of different kinds, to arrange for interest and sinking funds to come from these bodies directly to its own account and to provide for the extinction of the unproductive debt out of the general revenues of the Central Government. The total amount of money thus received will not be lost—it will still be available for the capital requirements of public bodies. But the step would mean the co-ordination of all the functions connected with the administration of the Indian public debt."

An institution like the one we have suggested would help in gradually standardizing the rates at, and conditions under, which loans are assigned to different borrowing institutions such as the railways, the provinces, and other public bodies. According to the present practice, different considerations govern the determination of the rates of interest charged on advances made by the Government of India to different classes of borrowers. According to the

Finance and Revenue Accounts of the Government of India for 1927-28, "the rate of interest charged on advances to Government servants, has been fixed for the present at 5 per cent, while the rate charged on loans and advances to Indian States, public bodies and persons, etc., is normally 6 per cent, though it is occasionally varied for special reasons. The rate of interest charged by the Government of India to the Provincial Loans Fund is determined with reference to the cost of new borrowings to the Government of India from time to time." It is stated, however, in the same publication, that "the rate of interest charged on advances to the Provincial Loans Fund during 1927-28 was 4 $\frac{3}{4}$  per cent." The rate of interest paid by the Commercial Departments came to 5.38 per cent in the year 1927-28. There is, therefore, a *prima facie* case for some sort of standardization of the rates of interest to be charged from the borrowing clientele of the Central Government.

With command over large funds received from the lending departments, and with other incoming resources, the new institution would, on certain occasions, be in a position to dictate favourable borrowing terms to the money market on its own capital issues. All the materials for the framework of a body similar to the National Investment Board, which has been recommended for Great Britain in the report of the Liberal Industrial Enquiry, already exist in India. There is a considerable amount of co-ordinated borrowing by the Central Government for all purposes, there is the nucleus of the fund for administration by such a body in the form of the Provincial Loans Fund set up for the purpose of granting loans to the provinces, which is financed from funds raised by the Central Government, there are the investing departments, and there are the departments that need borrowed funds. What we urge is merely a transfer of all these banking and investment functions from the hands of the Finance Department of the Government of India to the care of a separate organization working under the close control of the Treasury. "I look forward to the

day," said Sir Basil Blackett in foreshadowing future developments in the working of the Provincial Loans Fund, "when the Fund may be administered by an Indian body corresponding to the National Debt Commissioners, or the Public Works Loan Commissioners of England, and the money required for advances from the Fund raised in the open market by the controlling body, on the security of the assets of the Fund. It is too early yet to say when such a development, though it may already be foreseen, will materialize. I am confident, however, that considerable benefits will accrue to the finances of India when the day comes on which the advances made by the Central Government to the Provincial Governments will be excluded from the Public Debt of the Government of India in the same way as advances made on the guarantee of the British Treasury to public bodies in the United Kingdom are excluded from the British Public Debt. Not only these advances to the Provincial Governments, but also the Railway Debt of the Government of India may ultimately be separated from the ordinary debt, and raised, subject perhaps to a Government of India guarantee, not on the general credit of the revenues of India, but on the security of the assets of the Provincial Loans Fund and of the railway undertakings of the State, respectively. The true facts regarding the public debt of India would be less obscure than they are, and the facilities for raising new capital would be widened."

Almost similar views have been expressed by the Indian Statutory Commission. Referring to the standardization of the regulations for provincial loans, and the co-ordination of their borrowings, the Simon Commission propose that there should be set up in India a Provincial Loan Council, consisting of the Finance Member of the Government of India and the Finance Ministers of the provinces.

It is of some interest in this connection to point out that both the majority and minority reports of the Acworth Committee

thought that the present agency for the issue of Government loans requires to be organized much more thoroughly and on a much wider basis. The new institution can achieve a twofold purpose. It can finance local bodies as well as important industries. The Credit Foncier in France and Zemska Banka in Czecho-Slovakia supply long-term funds for industries and finance local bodies. The Board of National Investments will thus be very helpful to the major local bodies that now sometimes experience some difficulty in raising the necessary amount of money or can raise it at a high rate of interest. There is a great deal of overlapping and wastage of public funds in these borrowing operations.

"A body like the one the establishment of which we are suggesting, ready to finance all important local bodies and agreeing to receive payment in the form of annuities including interest and sinking-fund payments, spread over a period of years appropriate to the character of the loan expenditure, would avoid the considerable waste due to the present overlapping and a great deal of the inconvenience that is frequently faced by the borrowing institutions.

It would not only perform the functions of propaganda and publicity as to the true position of the Indian Public Debt, but would serve to maintain confidence in the minds of external and internal investors by a judicious discharge of the work assigned to it. Such an institution could, also, effect a desirable separation between the commercial and the unsecured debt, a step that would lead to the avoidance of political controversies as regards any section of public debt."



# CENTRAL BANK CONSTITUTIONS

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## SUMMARY

The paper begins by pointing out the importance of economic, political and historical factors of a country in the shaping of its central bank. The usual analysis of constitutions into (a) shareholding, (b) State-owned, and (c) mixed types is pushed on further to indicate the diversified forms of each type. It is shown that while private ownership may co-exist with complete State control, State ownership is not necessarily inconsistent with a fair measure of independence. The practical working of each type is seen to be so diverse in details, that any rigid classification appears to be of little practical importance.

Some main arguments in favour of the shareholding type are considered, such as safeguard against inflation and immunity from interference in day-to-day administration. Reasons for advocating State ownership, which hold good in all countries, viz., those based on participation in profits, the exercise of the prerogative of issuing currency, and effective control of the bank in the national interest, are examined. At the same time the special circumstances, in certain countries such as the dearth of private capital, the risk of foreign domination, and the danger due to powerful sectional interests are noted. If there is a suspicion in the public mind that the central bank is not being run entirely in the national interest, it can never prove a success. The present attitude of Indians regarding State control and State ownership is sought to be examined by considering the cases of the Imperial Bank and the State Railways. The special difficulties facing the Reserve Bank of India whether set up now or in the future are pointed out. The need for elasticity and caution is emphasised.

## OBJECT OF THE PAPER

There is hardly any difference of opinion on the question that India requires a central bank, the only difference being as to its



constitution. The object of this paper is to examine briefly the constitutions of leading central banks of the world and the special difficulties in India, in order to give some idea, however imperfect, of the form which seems to be most suitable for this country.

### **Central Bank Shaped by its Environment.**

The central bank of every country has been much influenced by the economic, political and historical circumstances under which it has arisen and since developed. Sometimes it is "consciously devised to meet the circumstances . . . of a particular environment." But even when such premeditated plans are absent, the force of circumstances may gradually transform an ordinary bank into a central bank. The Bank of England which was started as a profit-making private concern has gradually developed central banking functions, though it still retains its old constitution. The time force is equally potent in effecting constant changes in the working of well-thought-out schemes. To cite only one instance, "the original draft of the Federal Reserve Act . . . as it was enacted in December 1913, continued the policy of insisting upon the member banks keeping part of their reserves on their own premises, but . . . there developed a policy which is now 100 per cent effective, of insisting upon member banks keeping the whole of their compulsory cash reserves at the federal reserve bank."<sup>1</sup> It may be argued that this is only the consummation of the plan for the centralisation of reserves and thus there has been no break-away from the original scheme. But can the same thing be said about the rediscounting policy of the federal reserve system? The original intention was to develop the bill market by offering abundant facilities for rediscounting. But later on, when it was felt that the member banks were using credit obtained from the federal reserve system in a manner contrary to the intentions of the

<sup>1</sup> Journal of the Institute of Bankers (London), January 1930.

federal reserve authorities, such facilities had to be restricted. At present bills which are "eligible" for rediscount are not necessarily acceptable and various expedients have to be devised for the purpose. Thus the relation with member banks has become much more intimate than originally contemplated<sup>2</sup> although there has been no corresponding change in the constitution as such. But if these recent developments had been foreseen, probably the constitution would have been differently framed from the very beginning.

### **New Duties and Responsibilities of Central Banks.**

Apart from such changes in the working, there are fundamental reasons in favour of flexibility and elasticity in the constitution of a central bank. The functions of a central bank have materially changed during the last hundred years. In its earliest form, it was a bank of issue which merely involved the responsibility of maintaining the parity of its notes with the standard currency. During the nineteenth century, another function was added, viz., the management of a financial crisis. In recent years, an important task has been imposed, viz., the stabilisation of the price-level. These new duties and responsibilities must have their reflexes in the scheme of future central banks, as also in the working and possibly the constitution, of existing ones.

### **Three Types of Central Banks.**

At present there are 32 central banks in the world, out of which 17 are owned by shareholders, 8 partly by the State and

<sup>2</sup> The same thing has been reported by Sir Ernest Harvey to the Macmillan Committee about the Bank of England. Said he: "... I do not mean to say that any member of the discount market can come in and get accommodation to an unlimited extent. The relations between the Bank and the discount market are exceedingly intimate."

partly by shareholders, and 7 entirely by the State. Of these three types shareholders' banks are the oldest and form naturally the predominant group. As is well known, the Bank of England was started as early as 1694 and the Bank of France in 1800 as note-issuing shareholders' banks. The pattern thus set up, was utilised by most of the pre-war central banks in different countries.<sup>3</sup> Some of these were started as mere banks of issue. Before the War, there was no central bank of the mixed type, i.e., owned partly by the State and partly by shareholders, though there was a provision in the charter of the Bank of Japan that 50 per cent of the shares might be held by Government. The first note-issuing State Bank in Europe was the Bank of Sweden which began to issue notes as early as 1661 and became a central bank with the sole right of note-issue in 1897. Excluding the State Bank of Tsarist Russia which was liquidated in 1917, there was only another State-owned central bank<sup>4</sup> before the War, viz., the National Bank of Bulgaria established in 1885. Thus out of 14 pre-war central banks as many as 12 were of the shareholding type. After the War, several banks of this type were established one after another, under the auspices of the League of Nations. But in spite of this, banks of the mixed type seem to have been gaining ground. Of 18 post-war central banks, 5 are owned by the State, 8 belong to the mixed type and only 5 are shareholders' banks.

<sup>3</sup> The dates of establishment of these banks are given below :

1814, Netherlands Bank ; 1816, Norges Bank ; 1818, National Bank of Copenhagen ; 1850, National Bank of Belgium ; 1875, Reichsbank ; 1882, Bank of Japan ; 1893, Bank of Italy (it obtained the sole right of note-issue in 1926) ; 1907, Swiss National Bank ; 1913, Federal Reserve system of the U.S.A.

<sup>4</sup> We have not mentioned the Commonwealth Bank of Australia, established in 1912 as a State institution because it was not a central bank in any sense before 1924.

### **Different Forms of the Shareholding Type.**

Each of these types again has different forms. In the earlier central banks, the shareholders are private individuals, but in some of the later ones there are corporate members also, e.g., in the South African Reserve Bank established in 1920. The same system prevails in the Reserve Bank of Peru whereas in the Federal Reserve Banks of the U. S. A., member banks alone are the shareholders.

### **Powers of Shareholders in Theory and Practice.**

The control exercised by shareholders is also not uniform. In the case of the Bank of England and of the new Reichsbank alone, the constitution vests the shareholders with the management. Thus in theory the Directors of the Bank of England are elected by the shareholders to whom alone they are responsible but in practice they "co-opt one another." This freedom from State control is based on historical reasons but is now justified by the management of the Bank as a public trust. In the case of the new Reichsbank, the shareholders appoint the managing board through an indirect system of election. This lack of State control is due to the exceptional circumstances of the year 1924, when the financial policy of the German Government was looked upon with suspicion. But as Kisch observes this distrust "would probably not have been so manifest had the reorganisation come entirely from within the country." Even in this case, the President of the German Republic has a limited veto over the election of the President of the Bank. In all other central banks of the shareholding type, the directorate is, in part at any rate, appointed by Government. An interesting instance is furnished by the old Reichsbank where all the members of the managing and executive body, viz., the Bank-Direktorium, were appointed for life by the Emperor, on the nomination of the Bundesrat, the Central

Committee of Shareholders having only advisory powers.<sup>5</sup> An extreme instance among existing banks is given by the Bank of Norway, in which the "shareholders have no control of the administration and no provision is made for general meetings."<sup>6</sup> When the shareholders are partly or entirely corporate members, the State actually nominates or confirms the appointment of some directors. The truth is that shareholders in a central bank are for practical purposes mere stockholders, getting almost the same dividend year after year. Thus they do not have "the same inducement to take an active interest in the administration as exists in the case of an ordinary company."

### **Different Forms of Mixed Type Central Banks.**

Of the central banks in which the shares are held partly by the State and partly by others, there are also several forms. In some the State subscribes shares but has no voting rights, e.g., in the case of the Bank of Poland and the Bank of the Republic of Columbia which can therefore hardly be distinguished from pure shareholders' banks described above. In some others, which are much more frequent, the State owns a minority of shares. The proportion varies from one-tenth in the case of the Bank of Greece to one-third in the case of the National Bank of Czechoslovakia. In the proposed Turkish Central Bank, 15 per cent of its shares are to be reserved for Government. There is at present only one central bank of the mixed type in which the majority of shares is owned by the State. This is the Bank of Esthonia which was started in 1919 as a pure State Bank but has recently disposed of 30,950 shares to the public, retaining 69,050 shares in the hands of Government.

<sup>5</sup> Final Report of the Chamberlain Commission, p. 84.

<sup>6</sup> Kisch and Elkin, *Central Banks* (third edition), p. 35.

### **Different Forms of State Central Banks.**

State central banks may also be divided into different categories, according to the degree of governmental control. Thus the bank may be a mere department of government. The best example of this is the State Bank of the Russian Soviet Republic over which the People's Commissary of Finances exercises a general supervision. "He directs the general policy of the Bank, approves all the general rules of operations of the Bank as well as the rate of interest and commission to be paid . . . (and) ratifies the annual estimates of expenditure and annual reports and balance sheets." A variant of this form, is furnished by the Riksbank of Sweden, which is administered under the direct supervision of the Legislature, through seven directors, one of whom, the chairman is nominated by the King and the remaining six directors are appointed by the Legislature. In the next class of State central banks, a certain amount of non-official control is provided for. Thus out of the eleven directors of the National Bank of Bulgaria, four "are elected by outside bodies, such as the Chamber of Commerce or the Bourse of Sophia." The Commonwealth Bank of Australia does not differ much from this type. Its present Board of Directors consists of the Governor and seven other directors, including the Secretary to the Treasury as an "ex-officio" member, and "six persons who are or have been actively engaged in agriculture, commerce, finance or industry." It is true that all the directors are appointed by the Governor-General but it is interesting to note that as against one official, there are seven non-officials on the Board, all of whom are appointed for a fairly long period. This prevents the Bank from being a mere department of Government. There is a third class of State central banks in which there is a considerable degree of independence from Government. For instance, in the case of the Bank of Latvia, "there is no direct subservience either to an

executive department or to the legislature.' <sup>v</sup> It is thus clear that the distinction between the various forms of central banks is one of degree rather than one of kind. The types of constitution shade into one another.

### **Can Freedom From State Control Prevent Inflation?**

Why then this controversy between State *versus* private ownership for the proposed central bank for India? Probably this is due to a certain confusion of ideas. It is often argued that private ownership is necessary to maintain the banks' independence. But, as already pointed out, whatever be the constitution of a central bank, it can never be entirely free from State control. Thus the independence can only mean freedom within a limited sphere in its day-to-day working and that so long as it does not run counter to national interest. This is demanded for diverse reasons. One popular argument is that a government is tempted to finance its expenditure by extensive borrowings from State-owned central bank and thus to give rise to inflation of currency. But as Kisch points out, such abuses are "possible when a country has ceased to be on a gold basis. As long as convertibility is maintained, the worst evils resulting from Government intervention in banking and currency control are avoided." To quote another currency authority, "As a safeguard against inflation, no reliance can be placed upon the independence of a central bank. Whatever the law may say, the central bank will lend to the Government in an emergency."<sup>8</sup> The currency history of the world since the War furnishes many examples that shareholding central banks have been as bad sinners as State central banks in the matter of inflation. Another argument, closely allied to the last one, is that it is necessary to secure independence from Government interference so as to ensure the automatic regulation

<sup>7</sup> Kisch and Elkin, *op. cit.*, p. 23.

<sup>8</sup> Hawtrey, *Trade and Credit*, p. 13.

of currency. But in these days when stabilisation of prices is regarded as one of the most important functions of central banks, any mechanical rule for the expansion and contraction of currency must be ruled out. Thus whatever might have been the force of this contention in pre-war days, the argument cannot hold good to-day.

### **Immunity from Uninformed Criticism and Undue Pressure.**

The only valid argument in favour of the independence of the central bank is the necessity for securing freedom from outside criticism and pressure in its day-to-day administration. The importance of this has been made clear by Hawtrey in the following words: "... whenever an expansion of credit is developing to excess a formidable opposition rises in the trading world to an increase in bank rate. When on the other hand, business is in a state of depression, no one minds what happens to bank rate. The influence of outside pressure is therefore, just the contrary of what is required."

### **State Participation in Profits.**

At the same time many arguments have been put forward in favour of State ownership which cannot bear scrutiny. It has been urged that State ownership is necessary so that the profits earned by the bank in dealing with Government money should go to the State. But it is not necessary to create a State Bank for this purpose. The shareholders' dividend may be limited and the State given a share of the profits in a shareholding bank. Thus the entire net profits from the note-issue of the Bank of England go to the State. In most other shareholding central banks, either some valuable service is rendered to the State free of charge or it gets a share of profits. The Bank of France makes large advances to the State, either free of interest or at very low rates. For the privilege of note-issue the bank makes also various payments to the State. In the federal reserve system of the U.S.A.



after the payment of a cumulative dividend of 6 per cent to the stockholders and some compulsory addition to the reserve, the entire balance of profits goes to the State.

### **Currency a Prerogative of the State.**

Another argument advanced in favour of the State-owned central bank is that the issue and control of currency are prerogatives of the State and should not be entrusted to a private institution. On this ground Dr. Shaw goes so far as to suggest that the central bank should be excluded altogether from the working of the currency system.<sup>9</sup> This is an extreme view, for the central bank without currency control, has no reason for its existence. But others have not gone so far. For instance, the late Mr. Madon observed, with reference to the proposed Reserve Bank for India that "it is impossible to hand over to a private bank owned by a body of shareholders the huge assets<sup>10</sup> of the Currency Department." To this it may be replied that modern States have delegated in their own interest, many of their functions to semi-public bodies. There cannot therefore be any valid objection to the exercise of the above function by a State-controlled central bank of the shareholding type.

### **Importance of Central Bank to National Economy.**

The third general argument is based on the proposition that the policy of the central bank so vitally affects the economic life of the nation that it should be nationalised. It is no wonder that the question of State ownership of central banks is being urged with increasing emphasis in these days of depression when the public is dissatisfied with the existing monetary organisation. For instance, Sir Thomas Allen and Mr. E. Bevin in their note of

<sup>9</sup> Shaw, *The Theory and Principles of Central Banking* (1930), Chap. 1.

<sup>10</sup> What would be the present value of these 'huge' assets?

reservation appended to the Macmillan Report, observe, "... we are firmly convinced that the great powers which the Bank of England already possesses, and which are (it is?) contemplated, should be developed more fully in the future, ought no longer to be left in the hands of a body which is in form a private profit-making institution, even though in practice it acts as if it were a public body." But this is really an argument for public control and not necessarily for public ownership.

### **The State May Have to Make Good Deficiency in Private Capital.**

Where there is a dearth of private capital and there is not a sufficient number of banks which can subscribe the share capital, the central bank cannot but be State-owned, at least in part. When the Norges Bank was started in 1816, the public was invited to subscribe to its shares. Ultimately however forced contributions had to be levied and although severe measures were adopted, only 60 per cent of the shares could be sold. Clearly a better course was for the State to take up the shares itself. This was done in the case of the Bank of Latvia, started in 1923. Even now the volume of operations of this bank "exceeds that of all the private credit institutions in Latvia combined." There does not seem to be any dearth of private capital in India for starting a central bank and this argument has little force in this country.

### **Safeguard Against Foreign Domination.**

Another argument in favour of State ownership is that it is necessary in order to avoid the domination of foreign capitalists. This is one of the main reasons why the entire capital of the Central Bank of China, as organised in 1928, was subscribed by the State. This is apparent from the provision in its charter that not more than 49 per cent of the capital will ever pass out of Government hands. A few years ago there was a proposal to convert the National Bank of Bulgaria into a shareholders' institution.

But the idea was given up as it was apprehended that the change would cause the control to lapse into foreign hands. If the dividend of the proposed central bank for India is limited by statute, foreign capitalists may not be attracted to purchase the bank's shares to any appreciable extent.

### **Safeguard Against Powerful Sectional Interests.**

Another argument similar to the last one is that State ownership of the central bank is necessary to restrain powerful sectional interests in the country. In Australia, the labour party imbued with socialistic ideas holds the view that the interests of labour and the commercial banks in the country are antagonistic. It was with a view to check these commercial banks that the Labour Government of Australia established the Commonwealth Bank. India also is not free from this feeling of a clash of interests, though it may not be equally articulate. The sense of conflict between the industries and the import trade as well as between labour and capital alone have been voiced in the legislature and the press. What the vast majority of consumers and the agriculturists think, has never been heard. It appears that the real reason why a State-owned bank is insisted upon in this country is the fear that otherwise the bank may be controlled by non-official Europeans, ordinarily resident in India, who, it is apprehended, have no sympathy for Indian trade and industries.

### **Removing Public Suspicion.**

How far, if at all, this suspicion is well founded, need not be examined in this paper. But a central bank started, without recognising the existence of this feeling, is foredoomed to failure. No credit institution can function properly in a mist of mistrust. But is State ownership the most appropriate method for allaying this suspicion? Will not a bank with a preponderance of Indian shareholders serve the purpose equally well? The maintenance of majority of shares in the hands of Indians, even when the bulk

of the shares is first subscribed by them, is not free from difficulties, although they might not be insurmountable.

### **Can State Control Serve the Purpose?**

Even then much reliance cannot be placed upon this Indian majority. For example, 49·4 per cent of the shares of the Imperial Bank are now held by Indians.<sup>41</sup> Yet there is widespread dissatisfaction among them that the Bank is not run in the national interest. There is little hope of a change in Indian opinion if this nominal minority of Indian shareholders is converted into a bare majority by the statute. Past assurances, clear and emphatic, by the Government have not been able to alter that opinion.<sup>42</sup> This feeling of mistrust in the Indian mind has its root in the 'preservation of European monopoly in the higher services of the Bank. The grievance is not that the European officers are unsympathetic to an Indian customer, but that in the present condition of the country they cannot have that intimate contact with him which is essential to a proper estimate of his credit. Again the Indianisation of the superior staff may be nominal without being really effective. The present method of recruiting Europeans in the Imperial Bank at a younger age with a higher salary than Indians keeps the latter perpetually subordinate to their European colleagues. Promotion being by seniority of pay and of service, no Indian can ever hope to be a Managing Governor of the Bank. A purely shareholding central bank

<sup>41</sup> Minority Report of the Indian Central Banking Committee.

<sup>42</sup> The Hon'ble the Finance Member in introducing the Imperial Bank of India Bill in the Imperial Legislative Council stated: "It need hardly be said that if a Bank of this sort is to be a success, if it is to play its full part in the development of the country, it must have its roots in the soil: an exotic will never bear fruits we look for. . . Our hope, therefore, is that the new Bank will grow up to be a really national institution. I must here repudiate in the strongest possible terms, suggestions that have been made in some quarters that the object of the scheme is to preserve a European monopoly. . . ."

would, it is apprehended, be open to all the limitations of the Imperial Bank as it now is. In any case, it is difficult to appreciate the wisdom of setting up a new bank with the glorified name of the Reserve Bank of India if in its working and constitution it does not inspire more confidence in the mind of the Indian people than the Imperial Bank of India.

### **Will State Ownership be More Effective?**

It is believed by many Indians that State ownership would lead to a real Indianisation of the central bank, which, as we have seen, is the only method of removing their doubts and misgivings. They argue that the Government cannot secure such Indianisation in a shareholders' undertaking, and cite the case of Indian Railways. It is said that there was some improvement in this respect, when the railways came to be owned by the State, even though they continued to be managed by companies. In railways under State management, the Indianisation of the superior staff has been much less unsatisfactory to Indian opinion. It must however be borne in mind that unlike a railway, a central bank cannot be directly managed by the State in India. Nor can any practical scheme for State ownership coupled with private management be suggested, as in the case of Indian Railways. Obviously, the State cannot find the entire capital and assume responsibility for the liabilities of the bank, without a dominating voice in the management. This latter, even if practicable, would be almost fatal to the proper working of a central bank. Whatever may be the case in Bolshevik Russia, in any country where private ownership of property and freedom of contract are the very foundations of the economic structure, it is impossible to conceive of a living central bank only as a department of the State. A purely State-owned institution would thus be no real solution, and as we have seen before, the experience of a purely

shareholding bank like the Imperial Bank of India has not been such as to inspire any enthusiasm in the country.<sup>13</sup>

### **The Need for Flexibility.**

It would thus appear that the only alternative in India is a mixed type. It is difficult however to lay down rigid rules with regard to the proportion of shares to be held by the State and the public, in the absence of any clear notion as to what form the future Government of India will assume. For the same reason, it is difficult to prescribe what proportion of non-State shares should be held by private individuals and by corporate bodies respectively. The method of election of directors and their control can also be profitably discussed only when the powers of the new legislature and the new executive are fully known. For, obviously, if the future Government is effectively controlled by Indian public opinion, State participation in ownership in addition to State control, of which so much is now made may lose some of its force.

### **The Need for Caution.**

It is therefore surprising that the Government of India in its Despatch on Constitutional Reforms, recommended the establishment of the Reserve Bank before the transference of responsibility. In any case as the Government has itself admitted, a period of falling prices is inopportune for the setting up of the Reserve Bank. Since then, the economic situation of the country has deteriorated still further. Not only has the fall of prices been catastrophic, but India is now off the gold standard with her reserves sadly depleted. The establishment of the Reserve Bank must therefore be deferred till more propitious times. In our haste and

<sup>13</sup> As stated by Mr. Philip Snowden (now Viscount Snowden) when he was the Chancellor of the Exchequer: "The constitution of a Central Bank should be such as to give the public confidence in its devotion to the interests of country." "**Capital**," January 3, 1929.

impatience let us not overlook the difficulties that stand in our way. We share with the U.S.A. the fluctuations inherent in the economic system of a big agricultural country, which are intensified in our case, as the exports consist of a few articles subject to great variations in prices.<sup>14</sup> Our difficulties are greater for other reasons also. For one thing, the bill market has not yet been developed. For another, we have a country where a considerable volume of indigenous banking lies outside the pale of organised banking so as to render the control of credit by the central bank more difficult. Above all, it should not be overlooked that India is a debtor country. When she returns to an international standard, the maintenance of her parity with the standard, must be more difficult than if she were a creditor nation. For it is easier in times of difficulty for a creditor country to restrict her foreign loans than for a debtor country to meet her foreign obligations. The Indian central bank must therefore be launched only after the accumulation of sufficiently high reserves. Its success will depend as much on its ability to meet these difficulties as on its constitution. One reason for preferring the mixed type is its flexibility and adaptability to meet new developments. Its ability to do so can alone win for it the confidence of Indians and the respect of the outside world.

<sup>14</sup> For instance of the total export trade during 1930-31, raw cotton formed 21.9 per cent, jute (raw and manufactured) 20.30 per cent, grain, pulse and flour 13.55 per cent, tea 10.68 per cent, and seeds 8.10 per cent.

# TOWARDS INDUSTRIAL PEACE

BY

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In the great majority of the Industrial Countries, adequate machinery for the conciliation and arbitration of collective labour disputes has been established, such machinery being an essential part of the social and administrative equipment of the Modern Industrial State. It is a necessary adjunct of Industry where the personal bond between the employer and employee has been completely shattered.

Various experiments have been tried and are still being tried in different countries, in order to promote the amicable settlement of differences between Capital and Labour and to minimise industrial disputes.

Though important changes in the machinery of conciliation and arbitration have been made to-day by some thirty countries, no country yet feels that it has found a perfect system, and in spite of all efforts for amicable settlement there has not been any marked decrease in the number of industrial disputes in any country. In Great Britain, it is calculated that in five years (1919—1923) the number of working-days lost per annum per thousand of population was two and a half times greater than in the five years before the war between 1909 and 1913 and something like nine times greater than during 1904—1908. Therefore the problem is to find not a machinery for negotiation and arbitration but some effective means for the prevention of strikes and lock-outs. Industrial disputes are the symptoms of a disease rather than the disease itself. Conciliation and arbitration attack the symptoms.



No wonder then that the symptoms should re-appear so long as the disease is not cured. Therefore to have an effective means for the prevention of industrial disputes, note should be taken of their root-causes which are economic and psychological in character. It should be noted however, that the economic factor presents great difficulty, for no machinery, however well devised, can adequately adjust the economic problems involved in a shortage of market and a fall of trade which in turn lead to a rise of unemployment and reduction of wages. From this it is not essential to conclude that the scope of conciliation and arbitration is limited, but on the contrary such problems can be faced more effectively through such machinery. This psychological aspect of the problem is more important, for the initial step towards prevention and settlement of labour disputes is to get the parties to meet together, for, if this happens, the points at issue can be discussed and amicable settlement can be brought about. It is this getting of the parties together that is most important and if this is achieved and if there is adequate machinery, then there should be means through which economic and other problems can be discussed.

Methods of conciliation and arbitration may be governmental, non-governmental, or quasi-governmental in their origin. In Great Britain these three methods are in existence. In the ship-building industry, machinery was set up to discuss the problem in the industries and to reach an amicable settlement of disputes, and this was not set up by the government, but by the parties themselves. Secondly, governmental measures for optional conciliation and arbitration and for enquiry are contained in the Conciliation Act of 1896 and the Industrial Courts Act, 1919. Two types of quasi-governmental machinery exist in Great Britain to-day, namely, Trade Boards and the machinery for conciliation and arbitration in Railways which rests on a clause inserted in the Railway Act of 1921 at the express wish of both parties. Non-governmental or quasi-governmental machineries have their own value for they can change and adjust according to the need of the particular

industry; but on the whole, from general experience in various countries, it would seem that governmental machineries are usually the most appropriate and have greater permanence and prestige, and as a broad generalisation, it may be said "that the most and best government can do is to set up appropriate machinery for dealing with industrial disputes generally, and for the rest, to help the various industries as tactfully as possible to deal with their own problems in their own way." There are various types of conciliations which may be divided into two varieties such as (i) Optional Conciliation, (ii) Compulsory Conciliation. Optional Conciliation may be subdivided into what might be termed (a) Passive Conciliation, (b) Active Conciliation, (c) Conciliation with coercive power. Passive Conciliation consists in the setting up of machinery, but the option of placing the differences is left to the parties and if they decide to bring the question in dispute to settle through the machinery they can do so or else they can decide not to have recourse to the machinery at all. The whole thing is left to the will and pleasure of the parties concerned, whereas in Active Conciliation, which exists at present in many countries, the professional conciliators such as officials of the Ministry of Labour, whenever they find there are differences between the parties, go and influence them to use the conciliatory machinery existing in the industries and facilitate to the best of their ability towards a peaceful settlement. Conciliation with Coercive Power is a different thing altogether, for by it parties are obliged to meet a Government Conciliator when he summons them, and he has power to ask for documents and other papers. This method only compels the parties to meet and settle if possible the disputes between them.

Arbitration is too often resorted to only after conciliation has proved to be a failure. Arbitration is the process of calling in a third party to decide on the rights and wrongs of a case concerning which the parties disputing cannot agree. "The essential feature of arbitration as a means of determining the conditions of

employment is that the decision is not the will of either party or the outcome of negotiation between them, but the fiat of an umpire or arbitrator." An arbitrator sits as a judge and after hearing the whole case issues an award. This method has its own advantages and disadvantages for the award is not obligatory on either of the parties, and generally the decision of the arbitrator is fairly certain to be displeasing to one side if not unsatisfactory to both. And even when the settlement is accepted by both sides there is generally a tendency for either party to feel that its case was harshly treated. But an arbitration award has the advantage of avoiding a dispute for the time being and thus giving time for the growth of a more conciliatory spirit on both sides.

Again if the point in dispute is only a question of fact, the truth of which is ascertainable, then arbitration is perfectly satisfactory, as for example in an industry where the principle of a sliding scale has been mutually agreed upon and only the fact of a rise in price is in dispute. Arbitration on that point by an impartial person is the best method possible, but here it should be noted that arbitration is merely subsidiary to conciliation.

The reason for the unsatisfactory nature of arbitration is very simple for "each of the parties rests its case on a distinct economic assumption, or even a series of assumptions, not accepted by the other side, and not expressly stated," and a decision by an outsider is fairly certain to be displeasing to one side or other, and even when accepted by both sides, it is not likely to be of long duration. Further the general weakness of arbitration in all such cases is that it really has no definite principles to apply and it only splits the differences as far as possible between the contending parties.

"Conciliation" is far superior in settling industrial disputes, for the strength of agreement arrived at by conciliation lies in the fact that it is arrived at voluntarily on both sides for the fulfilment of the agreement in spirit as well as in letter.

Italy (Italian Act of 3rd April, 1926), Belgium (New Royal Order, 1926), Norway (The Compulsory Arbitration Act, 1919), New Zealand and Australia have all introduced some sort of compulsory methods in bringing about industrial peace. In Germany also much pioneer work has been done in this sphere and the Whimer Constitution (Article 165) provides for the establishment of regional Workers' Councils, regional Economic Councils, a Federal Workers' Council and in the end a Federal Economic Council. "In this gigantic all-German Trust," says Mr. Farnham, "Germany has crystallised the tendencies of the industrial world for the past decade—the destruction of the ruinous competition, the consolidation for efficiency of operation, workmen's representation in management." These new Councils have not yet been given a fair chance owing to the abnormal political and economic conditions of Germany since 1920, and also owing to the hostile attitude of the employers. But once the employers accept it as they are now doing and give whole-hearted co-operation and support and mutual concession, then the spirit of opposition between Labour and Capital will die down and a favourable development can be expected.

In Great Britain the Whitley Committee recommended that in each industry there should be set up a National Industrial Council with the representatives of the association of employers and of the unions concerned and that in each district there should be set up a District Council for each trade, representative of associations in the district of employers and unions of employed. They further recommended that in each business there should be a Workshop Council or Committee representative of the worker and management in that particular business and that the Ministry of Labour and Board of Trade would act as a unifying principle between the National Councils. Further they said that in their considered opinion the "essential condition of securing permanent improvement in the relations between employers and workmen is that there should be adequate organisation on the part of

both employer and work-people. . . . We are convinced, moreover, that a permanent improvement in the relation between employers and employed must be found—something other than cash basis—what is wanted is, that the work-people should have a greater opportunity of participating in the discussions about and adjustment of those parts of industry by which they are most affected.” The whole underlying idea in the Whitley Report is “that the worker should have a real voice in determining the conditions of his everyday work, and this cannot be secured unless he can speak not only on matters affecting his industry as a whole, but also on those concerning the particular establishment in which he works.” In their Second Report they divided industry into large groups according to the degree of existing organisation and then modified the proposal accordingly.

On the question of conciliation and arbitration the Committee's conclusions were:

“While we are opposed to any system of compulsory arbitration, we are in favour of an extension of voluntary machinery for the adjustment of disputes. Where the parties are unable to adjust their differences, we think that there should be means by which an independent enquiry may be made into the facts and circumstances of a dispute, and an authoritative pronouncement made thereon, though we do not think that there should be any compulsory power of delaying strikes and lock-outs.”

To put it briefly the whole aim of the Whitley Report is to shape a policy whereby the opposing forces of Labour and Capital can be brought together to co-operate for the good of the industry as a whole, to found “Trade Parliaments,” representing unions of workers and employers. The implication of the Report is the unity of aim of labour and capital and the general purpose of the proposal is the self-government of industry.

They also recommended the establishment of a permanent tribunal and in accordance with this recommendation the

Industrial Court Act was passed in 1919, Part I of this Act dealing with Industrial Court, and Part II with Courts of Inquiry.

We have briefly seen how most of the Industrial countries have adopted machinery, voluntary or compulsory, to prevent and to mitigate the evils of industrial strife; and if India wants to advance her industrialisation smoothly, she also should take all "reasonable methods to promote industrial peace." It is desirable that voluntary measures should no longer be delayed in India, and except in one or two cases no serious attempt has been made till now for the establishment of Work Committees. In 1920 the Government of India started Joint Committees in their presses and such Committees are working in Messrs. Tata at Jamshedpur and at the Buckingham and Carnatic Mills at Madras. "But generally speaking the results achieved have been disappointing." However, it should be noted that the instability of labour, the migratory character of the workers, and the consequent temporary interest in conditions, the illiteracy and the language difficulties, all make it very difficult for the successful working of Work Committees in India. In spite of this "it is of primary importance that those responsible for management should be both able and eager to secure contact as direct as possible between themselves and the humblest of their employees." And for this purpose "the principal representative of the management must be in sympathy with the idea and determine to do his best to make the committee a success." Nothing has been done as regards the question of establishing voluntary conciliation machinery and it has not been even thought of seriously and the Central Government have done nothing up till very recently and no legislation on questions of arbitration and conciliation existed. However, two important committees in Bengal and Bombay respectively have examined these and have made certain recommendations. And the authors of the Bombay Report after carefully studying the situation in Bombay Presidency, admit the superior-

ity of voluntary negotiation, but they also recommend the formation of Industrial Courts of Enquiry to be followed if necessary by an Industrial Court of Conciliation. In 1924, the Government of India took up the matter and issued a letter (No. L-1078) asking all Local Governments to give their opinion regarding legislation for the investigation and settlement of Trade Disputes. Along with this letter they sent a draft Bill which followed the principle of the Canadian Industrial Dispute Investigation Act, 1907, but nothing was done till 1928 when they introduced a new Bill which was passed and which is commonly known as the Trade Disputes Act, 1929.

The Trade Disputes Act provides for the establishment of two different types of tribunals for the investigation and settlement of trade disputes, viz., Courts of Enquiry and Boards of Conciliation. The object of the Courts of Enquiry, which are ordinarily composed of persons having no direct interest in the dispute, will be to investigate and report on such questions connected with the dispute as may be referred to them. The object of the Boards of Conciliation which will ordinarily include representative of the parties in the dispute will be to secure the settlement of the dispute. The Act further provides that persons employed on monthly wages in Public Utility services will be liable for imprisonment and a fine for wilful stoppage of work without notice in writing. The Act has been used only on three occasions up till the end of 1929.

Unfortunately this Act does not provide for any standing Industrial Court. The setting up of a standing Arbitration Tribunal in the form of the Industrial Court in each province would be an improvement of the Act, for if any question in dispute which could not be properly solved by a joint committee of Employers and Employees, either of the parties will have facility for submitting its case automatically to the Industrial Court. The Industrial Court in Great Britain has worked very successfully, and as Sir Harold Morris says, "it has the advantage of dealing with cases

expeditiously and the reports will enlighten the public regarding the merits of the particular case."

The Courts of Enquiry and the rules of bringing the Courts into action should be made more elastic than provided by the Act; for in such an enquiry the whole position of the industry is reviewed and especially the particular cause in question and thus by their report, the public and others have an idea of the whole situation. These reports and discussions would be far more useful if, as Prof. Henry Clay says, "in all reports of such enquiry statistical analysis of the position of the industry" is included, and, as Arthur Pugh says, "the purpose might be more profitably and successfully prosecuted by calling into existence a permanent national organisation of an authoritative, objective and impartial character, to explore the whole ground of every dispute, with the single intention of eliciting all relevant information regarding the issue and of making recommendations for dealing with it."

Such a permanent body in each province would be very useful for, whenever a party fails to come to a settlement, the matter can be referred to this organisation, and its decision, after all the facts before it, would inevitably be of great weight to both the parties and the public.

Apart from this, owing to the illiteracy of the workmen, extravagant claims are put forward after the strike has begun, and also strikes often occur without notice and without any clearly defined grievances. Under the circumstances, at least for some time to come, powers should be given to these provincial Courts of Enquiry to intervene whenever there is trouble in an industry and it should be made a law that no lock-out or strike should take place before the Board's report is published. It may be argued that this suggestion is compulsory arbitration in disguise, but such criticism is not correct, for it only endeavours to postpone a stoppage of work for a brief period and does not destroy the right of employers or work-people to terminate contracts. It gives time for necessary amendments and changes in the agree-



ments before entering upon a strike, and it legalises the interference of the community and allows it to know all the points of a dispute which may affect it by allowing a Government Department to investigate the matter. Thus it facilitates exhaustive discussion and gives the public a correct view of the situation and the cause of the dispute.

Apart from this, each provincial Labour Department should have trained conciliators with power to intervene and to help the parties when a dispute is threatened, for their intervention would have great psychological value. It would not be their business to enquire into the merits of the case: as Sydney Webb says: "They are not called upon to make up their minds whether the employers or the workmen were in the right. They had not even to choose between the rival economic assumptions on which the parties rested their respective cases. But their function is to see that the representatives of both sides go on negotiating until an agreement or basis was discovered on which it is possible to agree."

Therefore the great need of the moment is a new outlook and a new constitution for industry in which the worker may have rights similar to those of the employer in order to give vent to self-expression. The best hopes lie in bringing workers and employers together so that they can deal jointly with the problems facing the industry. First of all this idea of bringing workers and employers should be started within the works in order to carry on the every-day work in industry. Hence every means should be taken to establish Workshops Committees or Works Councils. These Works Councils are not intended to decide principles or determine wages but Workshops Committees and Works Committees can function on subjects less controversial and subjects that should be dealt with at the earliest possible moment. The matters which immediately concern the worker should be dealt with promptly, for though the grievance is small, it may spread discontent and in the end result in industrial dispute. Such Workshops Com-

mittees will bring into closer contact the employer and the employed and will benefit both and have educational value.

Secondly, in order to improve substantially the prospect of peace in an industry, permanent Boards with frequent joint meetings, to discuss all the problems connected with the industry should be established. Co-operation on all sides will bring about harmony and there is an urgent need for closer personal co-operation between the heads of industrial concerns and the workers in those concerns and a need for a better system of informing employees in matters which relate to the progress and advancement of the particular industries in which they are concerned. Many of the troubles in industry to-day are due to misunderstandings and lack of appreciation and tolerance of the point of view of the other side ; and these obstacles to progress can be considerably reduced " if there were closer contacts between the employer and his work-people so that each might be better informed as to the needs and difficulties of the other."

In many centres in India, machinery for joint consultation, workshops committees, voluntary conciliation machineries could be started profitably, which " would go far to strengthen the better element and to increase that sense of responsibility in Trade Unions which so many employers are anxious to develop."

Through co-operation alone, many misunderstandings could be removed and in it the hope of industrial peace lies and " the attempt to deal with unrest must begin rather with the creation of an atmosphere unfavourable to dispute than with machinery for their settlement." The authors of the Royal Commission on Labour in India say that one of the important factors that is at work in creating industrial unrest in India is the lack of contact which too often exists between employers and employees. They further point out that " in practically every centre and every industry the lack of contact and understanding is evident and in the interest of all concerned we urge that every effort should be made to bridge the gulf." They plead that more attention should be

given to this difficult question of human relationship and point out that "the weakness in this direction has already produced serious effects, and the outlook in some of the centres was menacing." "Unless a vigorous effort is made to effect an improvement the development of large-scale industrial enterprise is likely to be difficult and precarious."

Therefore it is essential that both employers and employees must realise that Industrial Reconstruction can be undertaken only in conjunction with and with the co-operation of both parties. They also should recognise that the common interests that bind them are more powerful than the interests which apparently separate them. Realising that Capital and Labour are both essential to production and that they have common interests, every effort should be made to join hands and work in harmony, adjusting their differences sympathetically and by peaceful methods.

Thus Capital and Labour in industry are interdependent and neither of them can do anything without the help of the other. Anything which affects either of them is detrimental to industry and the reward of all parties concerned can come only through full and harmonious co-operation.

# CONFERENCE PROCEEDINGS

The proceedings of the Conference began by a welcome address by the Vice-Chancellor as Chairman of the Reception Committee, and that was followed by an address by His Excellency the Governor, declaring the Conference open.



## PRESIDENTIAL ADDRESS

BY

PROFESSOR T. K. DURAISWAMY AIYAR

LADIES AND GENTLEMEN,

Let me at the outset thank the members of the Economic Association for the confidence they have shown in me by electing me to preside over their deliberations at this Conference. Indeed to a student of any subject nothing counts as much as the appreciation of fellow-students devoting themselves to the same field of study. This Conference is being held at a most momentous time since it may be stated without any exaggeration that no past year ever witnessed as many epoch-making events in the world of economics as the year that has just passed, 1931. It is indeed a happy circumstance that the venue of this year's Conference is Bombay, the premier Industrial City of India. This city has a peculiar hold on the country since it has been throwing up from time to time businessmen of genius who have given evidence of daring originality of conception and patient determination in execution. Further to students of Indian Economics the names of Ranade, Gokhale and Tata easily occur. Presiding over the last Economic Conference held in this City of Bombay in 1924 our distinguished countryman Sir M. Visveswarayya made the remark that the City was passing through an economic depression. The audience before me do not require to be told that the City has been afflicted with that depression ever since and recently it has become much more pronounced. When one reflects on the fortitude shown by this great City through the accumulation of distress it has been unfortunate enough to pass through during the last ten years, one is filled with the hope that in the coming era when

the sons of the soil will be called upon to shoulder the burden of the determination of policy as well as the execution of it, the City of Bombay will play a dominant and striking part.

The year 1931 that has just passed will become memorable in the history of the world for the extreme depths sounded by the world depression in trade and England having gone off the gold standard. To the student of Indian economics the year that has passed since the Conference met at Lahore has been crowded with events of outstanding significance. Firstly, the economic depression which it was expected would pass away has become more widespread and deep-seated since then and India has been affected more than most nations. It may well be that on no single problem since the creation of the world has so much of brain power been concentrated as on the causes of the present depression and the measures for remedying it. Secondly, the preliminary figures of the census of India came to be known and the large increase in population disclosed by them has been giving food for thought to Indian economists and publicists. Thirdly, Sir Arthur Salter whom the Government of India invited to report on suitable machinery for the satisfactory handling of economic questions submitted a valuable report on the project for Economic Advisory Councils for India. Fourthly, the Royal Commission on Labour submitted its unanimous report and the conspectus of industrial labour conditions in India which the Report has furnished has revealed in a very striking manner the heavy arrears of progress that industrial labour has yet to make up before labour conditions may be considered satisfactory. Fifthly, the Central Banking Enquiry Committee has submitted a voluminous report covering a wide range of topics with the proper understanding of which is bound up the provision of means for promoting agricultural, industrial and commercial progress in the country. Sixthly, the severe repercussion of the trade depression on the finances of the Central and Provincial Governments made them embark on measures of retrenchment and fresh taxation to a degree not

paralleled on any previous occasion in the history of British rule in India. Lastly, closely following the departure of England from the gold standard the Indian currency system ceased to be linked to gold and became linked to sterling. The very enumeration of the above events is likely to bring home to everybody the magnitude and significance of current Indian economic problems and the burden of responsibility thrown upon those who are directly concerned in the teaching of Economics and the study and investigation of economic problems. Though the Economist has to be rooted in economic theory the subject in the study of which he is engaged is, in the main, a fruit-yielding one. This circumstance imposes considerable responsibility on the economist and the public are led to expect from him guidance in the comprehension and treatment of the many economic problems that may assume suddenly rather an unexpected complexion.

It is one of the paradoxes of our civilisation that ten years after the termination of the Great War of 1914-18 an industrial depression of a severe and unprecedented character should have overtaken humanity. Various interpretations have been placed on this phenomenon. It has been said that the distress through which the world is passing at present is nothing but the travail heralding the birth of a more satisfactory economic organization. Some thinkers conceive of this development as a challenge to the capitalist system. Others conceive of it as the failure of the gold standard. Doubts have been expressed whether capitalism has not outlived its period of usefulness. The economic blizzard that has been blowing so fiercely all over the world and that has shown no signs of abatement in its fury is considered by some to mark the death throes of capitalism. Let us examine the problem dispassionately.

What lends point to the situation is that this depression followed in the wake of various attempts to implement what may be called an international outlook. With a flourish of trumpets the Bank for International Settlements was founded at Basle



which, it was hoped, would tend to bring about harmony in the working of the world exchanges. It was pointed out that the Young Settlement of the Reparations Problem lifted the whole question out of the morass of political inanity into the haven of commercial reckoning. The author of the plan Mr. Young delivered a lecture not long ago which laid stress on the health which the settlement brought about in international relations which he hoped would make for the peaceful economic progress of the world. Most parts of the world neutral as well as belligerent in the war of 1914-18 have not yet recovered from the depression into which they were thrown in 1920. In these circumstances when longing eyes were being cast on the horizon for discovering any signs of trade revival what actually happened was a catastrophic fall in prices extending over almost the entire region of productive activity. Economists and businessmen were almost taken aback by the violence and all-encompassing character of the tornado. It appeared to the reflective mind an uncalled for gratuitous infliction. It almost amounted to the bankruptcy of human endeavour that producers who except in the United States of America have been suffering for years on account of a very gradual fall of prices and who were anxiously watching for signs of trade revival should face overwhelming losses on account of a rapid landslide in prices. It is true that economists have for some years been pointing out that the accretion to the gold resources of the world will in future be at a reduced rate. This warning, however, was not pressed home since, with the progress of banking and the economy of gold that was becoming widespread, it was rightly felt that there was no danger of the fabric of world production collapsing from the inadequacy of gold. At any rate no first-rate economist realised that the commercial world came in the autumn of 1929 near the brink of a precipice involving a violent shock to the whole economic system. All the phases of the depression have come under very close and searching examination from different points of view. While realising that many powerful

minds have thrown light on the problem I should like to elucidate briefly my approach to it.

The opinion is gaining ground that the present depression presents features of a kind that can only be explained by the fact that we are at the end of one epoch of world economic relations and at the beginning of another. Such a conception can swim vividly into our consciousness only in the light of the history of economic evolution since, say, the beginning of the Industrial Revolution. Humanity seems to have reached one of those few milestones in the history of economic progress when the entire fabric of economic thought and practice is being subjected to a very searching examination in an atmosphere of nervous expectancy.

We are often disposed to forget that the economic organization of life in its present form is after all only about 80 years old. It is only from about the middle of the 19th century that most industrially advanced countries of modern Europe came under the influence of what may be termed the Industrial Revolution though England began to undergo that experience a little earlier. The country that was the foremost expression of this capitalist organization of society was, for long, Great Britain. She was the workshop of the world and for years she was not merely the model but also the source of inspiration of ideas in industry for the rest of the world. England was the country where the conspicuous features of modern economic organization were finding their characteristic expression for a number of years—division of labour, application of science to agriculture, industry and transport, large-scale production, localisation of industries, urbanisation, joint stock organization of production, the application of large masses of capital in industry and an organized money market. A remarkable transformation of the world on the economic side was then witnessed, the moving spirit of this transformation being England. Till about the end of the 19th century the stage was dominated by her. A technique of international economic rela-

tions had been gradually built up based on a huge export of capital from England continuously to different parts of the world. One of the features of this technique was the large supply of railway material from England to different countries of the world which were being opened up and the building up of a strong mercantile marine employing steam power engaged in the conduct of trade between different countries. Another feature was the development of a world market for capital and a money market in London which stood the world in good stead by the efficiency with which it financed a large portion of the international trade of the world. A third feature was the harmony in interest that was built up between what may be termed the foodstuffs and raw materials producing countries and the manufacturing countries of the world. It was found by experience that new countries like Australia, Canada, the United States of America and India and developing countries like Germany required huge masses of British capital for furnishing themselves with the apparatus of modern economic life—particularly the railways—and in return supplied England with foodstuffs and raw materials which, in increasing quantities, were required by busy manufacturing districts whose population increased in numbers not less rapidly than their standard of life. Though in the last decade of the 19th century England was beginning to feel the competition of Germany in the industrial field, it may be said that England occupied a position of unquestioned supremacy in these respects during the second half of the 19th century. Another feature of the technique that was developed during the period was the gold standard. It has become to such a considerable extent part of our economic life that we may not realise that most advanced countries of the world went on the gold standard only since 1870 and the now powerful country of the United States of America went unequivocally on the gold standard only during the last decade of the 19th century. The leadership of the economic world throughout the period remained with England for a number of reasons. She commanded cheap

sources of power, her inventors were busy and lucky, her captains of industry showed great resourcefulness and capacity for organization and her banking system was an embodiment of efficiency, elasticity and vigour. Other nations like Germany, the United States of America and Japan, which have in the 20th century become her formidable rivals in manufacturing activity, were then developing their industrial structures very largely with the aid of the capital borrowed from England. In the light of the muddle into which the structure of world economic organization has been thrown recently one is led to think that it was fortunate that, during the formative period 1870 to 1900 when the gold standard was being introduced into different countries and when organised industries were growing in Germany, the United States of America and Japan, the leadership of world economic forces should have been held by England without a rival leading to unity of direction which helped forward the steady and rapid economic development of the world while England herself profited largely. This reflection receives considerable reinforcement from the circumstance that the period from 1873 to 1896 witnessed steadily falling prices. Up to the outbreak of the war the lineaments of the world economic structure remained more or less the same. The competitors of England were however growing in industrial strength. France was becoming an increasingly important creditor nation, while Germany also was beginning to invest capital abroad. The self-governing Dominions of England were also aspiring for a place in the industrial sun. In spite of these rumblings the world economic order was in equilibrium and England continued to hold, though with increasing strain, the position of primacy. This was in no small measure due to the fact that a great accession of strength accrued to the gold resources of the world particularly on account of the yield of the South African mines which helped to raise the world prices of commodities. Thus at the outbreak of the Great War the capitalist system presented an aspect of formidable strength which,

while leading to a large increase in the production of wealth, had succeeded in securing for the bulk of the people a standard of life far higher than what prevailed about the middle of the 19th century. On such a world the Great War of 1914 broke. As the war drew one important country after another into its vortex, the dislocation of the old economic order was increasing in its range and intensity. A new alignment of economic forces was taking shape. The old channels of international trade in many instances got blocked up and new channels necessitated by the needs of the war were cut. The upheavals were so tremendous that the end of the war witnessed an economic world in a state of flux the bearings of which could not be clearly comprehended by the most subtle of men. The uncertain factors in the situation were so many and of such incalculable magnitude. No single question caused so much complication and disturbance as the currency question. Though great changes had come over the magnitude and direction of world trade, though the conception of the gold standard itself underwent much modification and though it was felt that reparations and tariffs complicated the situation, the prevailing impression was that the old formulæ that had been evolved with reference to economic life till 1914 would be restored to their accustomed places and that there would be no fundamental changes in the organization of economic life. This conviction lay at the root of the large amount of capital lent on short- and long-term account to Germany by the United States of America and England between 1925 and 1928 in the hope that German efficiency and toughness will create the necessary surpluses for meeting reparations payment and her commercial obligations. Even the speculative movement on the New York Stock Exchange which gathered strength in 1929 did not shake this self-complacency.

Though economic events do not explode dramatically like political events the developments in the economic situation since the autumn of 1929 have been marked by a sweep and intensity

rarely witnessed in history. A series of events followed the Wall Street crash in more or less quick succession which shook the faith of thoughtful men and made them realise that world economic relations had entered on a new phase and that the task of restoring equilibrium assumed an altered complexion on account of a conjunction of forces and tendencies the import of which had previously not been adequately comprehended. Those events were in the main the catastrophic fall in the prices of commodities, the greater relative fall in the prices of foodstuffs and raw materials leading to what has been termed the 'barter crisis,' the financial straits to which countries like Australia, Argentina and Brazil were reduced, the threat of impending German bankruptcy and the crisis in England leading to that great and powerful country going off the gold standard. That a country with about £4,000 millions of capital invested overseas, which is the greatest international capital market and the repository of much of the free balances of the world should be driven off the gold standard in a time of peace even after the formation of a National Government which gave unmistakable evidence of its determination to balance the budget is an event of such outstanding significance that the circumstances which led to it require examination.

Strange, as it may appear, with reference to the practical Englishman, it was his absence of realism in regard to the working of the gold standard that, in the main, brought about the crisis in England. Having worked the gold standard ever since its inception in a manner that promoted economic progress throughout the world during the period of her unquestioned ascendancy in international finance and banking, England did not quite realise all the dangers inherent in the working of the gold standard since the pound came back to gold parity in 1925. A change had come over the proportion of world trade held by different countries. Whereas the position of the United States of America in that respect became stronger, that of England was weaker. In these circumstances, having regard to the large accumulation of gold in the

United States of America no portion of which she was anxious to release and the steadily increasing drain of gold into France since the Wall Street crisis, England, which laid great stress on the supreme importance of maintaining the gold standard, should have displayed a greater sense of her wonted realism. It was rather unfortunate that influential organs of public opinion in England together with some of her distinguished bankers helped to divert attention from the peril inherent in the gold situation as it was developing by expatiating on the symptoms of overproduction of commodities and the need for the reduction of labour costs. This faulty distribution of emphasis did not give the right lead to English public opinion. One who looks beneath the surface can detect during recent years in England a mild, and, it may be, suppressed, conflict between two schools of thought. One school represented by some of the great bankers was most emphatic about the maintenance of the gold parity of the pound sterling and called for a rapid reduction in wages and salaries. This school was impressed with the supreme necessity for maintaining the importance of London as an international financial centre. They did not sufficiently realise the danger to the gold standard arising from the growing maldistribution of gold and did not therefore press strongly for concerted action on the part of the great central banks of the world. This school gave much publicity to a book by a French author who criticised the want of adaptability and flexibility of British Industry while France was helping to undermine world economy by withdrawing huge quantities of gold from the world stock of that metal. The other school of thought was, in the main, represented by Professor Keynes, Sir Josiah Stamp and some businessmen. They were particular even like the other school that the competitive power of the basic industries of England should be restored. This school was aware of the various conditions that brought about the instability of the economic structure of the world. But they were particularly impressed with the danger to the capitalistic system involved in the massing of

increasing quantities of gold in the United States of America and France. They were apprehensive of the heavy fall of prices which may result from this development leading to many countries going off the gold standard. They were keen about exploring the avenues of international agreement in regard to the basis of credit with a view to arresting the fall of prices and reviving confidence. They however did not have the same hold on public opinion as the other school. It was rather extraordinary that those in England who were very keen on maintaining the gold standard did not adequately realise the implications of the steady massing of gold in the United States of America and France. Under the gold standard it should have served as a danger signal, the import of which it is difficult to mistake. To Great Britain particularly the development was of ominous significance. For she had a large amount of capital in goods abroad like Railways, rubber estates, tea gardens, oil wells, tin and gold mines. Her economy is partly based on the prosperity of countries producing raw materials and foodstuffs like Australia, Argentina, Brazil and India which a huge fall of prices is likely to place in the category of defaulters. Further, England has been increasingly borrowing funds on short-term account. Her internal economy has had to withstand the inelasticity of wage rates thus placing the industries under a great handicap. In these conditions the accumulation of gold in the United States of America and France should have in time shaken England out of her self-complacency, and made her withdraw her credits, realise her securities and accumulate gold. She did nothing of the kind but seemed to have believed that she could somehow muddle through to success. There was not, one should think, sufficient recognition of the conditions under which alone the very delicate system of the gold standard can work. In the altered conditions of international trade and finance since the end of the Great War England did not fill the same relative position as she did before. Whereas before the war England was the dominant world market for capital and



was the foremost commercial country with the heaviest foreign trade flourishing under a policy of free trade, since the war conditions had altered. The foreign trade of the United States of America exceeded that of England and tariffs stiffer and more widespread governed a larger proportion of the world trade. Whereas before the war the monetary gold of the world was dispersed in circulation among the people of many countries besides finding a place in the central banks, it came to be concentrated in recent years to the extent of about 70 per cent in the central banks of two countries only. Having regard to the potentialities for instability inherent in the unsatisfactory political relations subsisting between France and Germany it was the part of wisdom for England to have adopted a cautious policy of limiting her international obligations on short-term account, realising her securities and accumulating gold. Any other policy, whatever justification it might find in pre-war precedents, was out of accord with the requirements of the situation particularly while great countries like the United States of America and France were sitting tight on a huge quantity of gold which was the basis of the currency and credit system of the whole world.

The only development that might have enabled England to remain on the gold standard was a check to a further fall of prices, if not a recovery thereof. The political relations between France and Germany gave the finishing touch to an already complicated situation. With the heavy recall of funds from London in an atmosphere of nervousness England had to go off the gold standard.

One need not however deplore the decision of England in view of the fact that under the circumstances governing the continued maldistribution of gold the maintenance of the gold standard by England would have led to the disequilibrium of the balance of payments becoming much more pronounced than ever. The mere granting of further credits by France and the United States of America just before September 20, 1931, in the absence of a com-

prehensive policy regarding the gold situation in relation to world price levels would have enabled England to continue the maintenance of the gold standard for some time more but would have accentuated the unfavourable character of her balance of payments. For, the continued rise in the value of gold which would have supervened would have led to the hardships, from which England was suffering, becoming more pronounced. The breaking away from the gold standard gave some fillip to industrial production in England. The feeling of something like fatalism that was creeping over England for some time past received a much-needed check. The appropriateness of the action of England in the circumstances received confirmation in the attitude displayed by various other countries in respect of the gold standard. To us in India, a long overdue relief came as a result of the rupee being divorced from 1s. 6d. gold.

The important question, however, is the future of the gold standard. There are many elements of instability in the present situation. The heavy and continued fall in prices has brought about the derangement of the international capital market. For, the debtor countries growing primary products have found themselves unable to stand the strain of the payment of interest on capital already borrowed from the lending countries of the world. There is, besides, the peculiar position of Germany with a cloud of uncertainty hanging over the reparations questions and her short-term obligations. A number of proposals are being made with reference to the machinery of currency organisation for the future. Bi-metallism is one such remedy proposed. But in the absence of harmony between the important countries of the world an eloquent exhibition of which is seen in recent events, there is no chance for old prejudices breaking down and a new harmony developed with reference to the adoption of the proposals for bi-metallism. Another suggestion that is made is to organize the economic and financial structure of each individual country with reference to an index number of prices. This suggestion again

cannot meet the requirements of the situation, for the economic structure of the world thus far has depended to such a considerable extent upon international trade that the adoption of the proposal by individual countries of a scheme of regulation with reference to an index number of prices is incompatible with the maintenance of international trade on a level that could square with world prosperity. We are therefore thrown back upon the solution represented by the rationalisation of the gold standard. There is no doubt that, if only international understanding is secured and a genuine peace mind is brought to bear upon the solution of world economy, a situation is sure to be developed which will permit of all the wheels of international trade running again smoothly without perpetual dislocation of it by impossible tariffs and reparation payments. Given a will to work out a solution, there is enough monetary gold in the world to set the machinery of production and distribution running again so that continued prosperity is achieved. In this connection one feels that a strong permanent committee of economic and financial experts of very high standing well known for their freedom from obsession of militantly nationalistic outlook and regard for general prosperity and drawn from important countries of the world is urgently called for so that proposals of a very authoritative and reasonable character may be made with a view to breaking the present depression. Until, however, an international solution is reached it will be suicidal if proposals are adopted for restoring the gold standard by England. It is much better that the temporary inconveniences resulting from a fluctuating exchange are endured than a premature attempt is made towards the restoration of the gold standard.

### **The Banking Problem in India.**

To the student of Indian Banking, considerable material is available at present in the shape of the reports of the Central and various Provincial Banking Enquiry Committees. These reports deal with the entire field of banking organisation in all its different

aspects. Indian opinion had been insisting for a long time on a thorough examination of the banking problem in this country and it is satisfactory to record that the practical statesman has now at his disposal a large number of proposals having for their object the equipment in adequate measure of banking facilities.

The banking structure in India like that of every other country is the expression of its social and economic organisation. It derives its peculiar complexion from the various aspects of its economic life, among which the following are of particular importance, viz., 90 per cent of the population living in rural areas, 73 per cent being devoted to the pursuit of agriculture, the production per acre perhaps the lowest in the world, the very low standard of life and the absence of a keen desire for improvement, the very low amount of savings in the villages, and the prevalence of small-scale production in agriculture and industry.

Taking the condition of the villages, we are struck with the absence of savings on the one hand and the absence of any effective agency directed to the improving of the conditions of life. This explains why the co-operative movement has not made as much progress as it might have done. The extent of rural indebtedness has been computed to be about 900 crores. The organization of economic life being on the whole mediæval, the structure of banking as applied to rural life reveals characteristics out of accord with modern conditions. It is the fashion to pillory the moneylender who is held responsible for the resourcelessness and helplessness of the ryot. It is true that the moneylender in India has not taken the lead in any scheme of amelioration. But having regard to the nature of the economic organization in the countryside the moneylender admirably fits into it. In the absence of savings and the readiness to carry out obligations punctually and promptly, the services of the moneylender of the type with which we are familiar makes itself felt. The scope for raising the structure of credit on solid foundations in the villages depends on the spirit that informs the economic organization of

life undergoing a radical modification. In such event, there will be scope for Co-operative Credit Banks and Land Mortgage Banks functioning effectively and dealing with the problems of short- and long-term credit respectively. The Central Areas Banking Enquiry Committee Report points out probably in extenuation of the practices of the moneylender that the net rate of interest that he gets on his money comes to a very reasonable rate of about 6 per cent only. If this is true, it only proves how the whole system of the credit economy associated with the activities of the moneylender is wasteful. It is on a par with the functioning of a tax machinery under such conditions that the net amount of tax that goes into the treasury is about less than fifty per cent of the amount paid by the tax-payer. The only escape from the unsatisfactory credit situation of the villages consists in promoting the rapid evolution of conditions that would enable the co-operative movement to work effectively in different spheres like credit, sale, purchase and production.

The Central Banking Enquiry Committee have rightly devoted considerable attention to the part played by the indigenous banker and have made various proposals so that he may be of much greater service to the interests of commerce and industry. One of the important problems of banking in India is the provision of means by which the indigenous banker may be effectively linked to the central money markets. His importance in Indian economy is due to a number of causes:—Firstly, the castes to which the indigenous bankers in different parts of the country belong have from time immemorial been doing banking service for the country and have inherited traditions that have grown with the progress of economic conditions in the country. Secondly, in view of the prevalence of small-scale production in towns, the agency of the indigenous banker is peculiarly suitable. Thirdly, on account of the absence of adequate savings in the medium-sized towns, the scope for the creation of commercial joint-stock banks is not adequate. He also does a considerable amount of

remittance work since he has connections with different parts of the country and joint-stock commercial banking has not spread widely in the country. He further finances trade, draws hundis and discounts them. The financial resources of a very large number of indigenous bankers scattered over the country are in the aggregate very large and consequently the dependence of this class of bankers on the central money market is not very much. The Central Banking Enquiry Committee point out that, when the Reserve Bank is established, indigenous bankers who fulfil the conditions laid down should be treated as member banks with the right to have their bills rediscounted by the Reserve Bank. In this connection it is not quite clear to what extent the institution of the Reserve Bank will add to the bill portfolio of the indigenous bankers which will make it necessary for them to resort to the Reserve Bank for rediscounting purposes. Looking into the balance sheet of the Commercial Banks, one finds that among the assets of such banks, bills figure only to a very small extent. This shows that there are not enough bills available of such satisfactory character that the banks care to discount them. One of the most important problems that call for examination in this connection is the reason why the structure of industry and trade does not admit of a larger number of bills being created. It may be that the want of confidence on the part of the Banks in many of those who carry on trade and industry in the smaller towns explains this lack of the creation of Bills.

Turning our attention to Commercial Banks, we find that whereas the number of towns in India is 2300, it is only in 339 towns in 1928 that we find a bank or branch of a bank or agency of a bank. This paucity of banks may be explained by the absence of enough savings which might become the subject of deposits, the small part played by large-scale production by fairly big firms and big retail shops, the extent to which loans are required for consumption rather than production and the greater elasticity characterising the methods of the indigenous bankers.

A difference of opinion arose between the foreign experts and the Central Banking Enquiry Committee in respect of the scope for the expansion of banking facilities by the Commercial Banks. The foreign experts remarked that the country was not abounding with untapped banking possibilities. On the other hand the Banking Enquiry Committee referred to the various kinds of evidence which in their opinion pointed to the large scope that existed for the increase in deposits and therefore for the extension of the sphere of activity by the Commercial Banks. We, however, find that in spite of a little over 100 branches that the Imperial Bank opened since its formation, the deposits of the Bank have not shown any increase. It is, therefore, obvious that unless adequate steps are taken to improve the agricultural and industrial production, the scope for increased trade and increase in banking facilities is not likely to arise. An analysis of the assets of the Commercial Banks which discloses the very high percentage of investments in Government Securities shows that the scope for financing trade and industry by means of loans and advances is rather restricted. This shows that even the available bank credit represented by the small amount of deposits with the commercial banks is not fully availed of by trade and industry.

It would have been very helpful if the Banking Enquiry Committee had considered at length the question of the suitability of branch banking as contrasted with independent banking with reference to the character and the need for banking facilities in different parts of the country. One often hears complaints that the deposits collected by the branches in particular localities are spirited away to the headquarters, the localities concerned being thus deprived of funds. The history of banking furnishes illustrations of the good done by independent banking as well as branch banking, regard being had to the peculiar conditions of different countries and their stages of economic progress. It may be a matter for exploration whether, in view of the difference of language between different areas, the advisability of enlisting

local pride, talent and interest and the part medium-sized industries will have to play in the economy of India for a fairly long time to come, encouragement should not be given to independent banking wherever the conditions seem to be particularly suitable for such development. It may be that this method of advance may be fruitful in the matter of enabling the indigenous banker to become the Manager of a Joint Stock Bank. The objection that such independent banks would have on their hands large funds lying idle when the busy season of the locality is over loses its force in view of the fact that, on the establishment of the Reserve Bank, it will be open for the Banks to rediscount their bills and thus avoid the accumulation of cash lying idle in slack seasons.

In view of the unsatisfactory development of industries in the country, the Banking Enquiry Committee have devoted considerable attention to the question of financing industries. They have recommended that Provincial Industrial Corporations may be started with Government aid for the purpose. As for large-scale industries like Cotton, Jute, Iron and Steel, etc., one feels that private enterprise has been found adequate to finance them. The recent financial difficulties of industrial firms are due to the conditions that affected the raw material and the unsatisfactory nature of the market for finished goods. As for small industries which, according to the various Provincial Banking Enquiry Committee Reports, suffer from lack of adequate finance, the question arises whether their difficulties are not due to the absence of the requisite capacity for organising the production of goods with reference to the raw material and the securing of a permanent and satisfactory market for finished goods. The State may devote its attention towards creating conditions under which co-operative organisation may be resorted to with a view to the placing of such industrial concerns on a satisfactory footing. With a scientific system of bounties and tariffs, a spirit of confidence may be promoted, which may admit of private enterprise being equal to the occasion in the matter of the provision of adequate



finance for industries. The proper organisation of currency and credit by the Reserve Bank to come is likely to reduce the seasonal fluctuations in interest rates with the result that industrial finance will not be hampered by the high interest rates associated with the present currency and banking organisation.

It is rather remarkable that the managing agency system which is associated with successful trade and industry in India has not turned its attention to the line of merchant banking which may be made the basis of an organisation for enabling industries to secure funds from the general public.

The Banking Enquiry Committee have shown great enthusiasm for the very early establishment of a Reserve Bank. For nothing is more striking than the heights to which the bank rate rises in India during the busy season. In a scientific banking and currency organisation, there is absolutely no need in the conditions in which the trade of India is conducted in the wholesale markets, for the price of money to become very high in the busy season. This anomaly becomes all the more glaring since the percentage of the actual metallic portion of the proper currency reserve is very much higher than what the statute requires. It must be the obligation of the currency authority which in India happens to be the Government to finance legitimate trade requirements at reasonable rates of interest by issuing adequate quantities of additional currency. This is the only method available till the Reserve Bank is established. The term 'emergency' currency is not likely to give a correct notion of the purpose for which the currency is issued. In India, the season during which crops are moved annually requires huge quantities of additional currency the bulk of which later finds its way back into the currency reserve and the cash balances of the banks with the result that there is a large quantity of currency lying idle in the slack season with banks which does not earn appreciable interest. This demand for additional currency being a recurring one a reasonable forecast of which could be made with reference to the

estimate of the weight of the different crops to be moved and their wholesale prices, means should be found for placing adequate quantities of currency at the disposal of business. It is extraordinary that the combined wisdom of the Imperial Bank, the mighty exchange banks and the Indian joint stock banks has thus far not devised a machinery for inducing the Government to place the required amount of funds at the disposal of trade at reasonable rates of interest, so that the producer of the staples of export trade may get better prices for his commodities and those engaged in industry may have the advantage of cheaper money. It is true that Government officials in charge of the Currency Department may not have the requisite qualifications and may not be competent to transact what is, in essence, a banking operation. It may, further, be urged that the issue of 'emergency' currency can only be made against trade bills which are not available in the Indian market in sufficient quantity. These two objections though of some validity can be overcome. If the loans from currency reserve are made in the busy season for a short period against Government paper which the banks in India hold in large quantities, say at 6 per cent, it will have a beneficial effect on the producer of primary commodities and those engaged in trade and industry. Government officials may easily manage this business. A total limit of issue by Government may be set from year to year having regard to all relevant circumstances, like the estimate of the weight of crops to be moved, their prices, the presence or absence of speculation and the composition of the currency reserve. The sum total so fixed can be rationed among all the banks on the basis of the average amount of the loans and advances of each bank. At any rate since some considerable time may elapse before the Reserve Bank becomes an established fact, the ingenuity of the commercial world in close co-operation with the Government which is the currency authority must find some means by which the burden of high interest rates for financing legitimate seasonal trade should be removed. There is, however,

at present an obstacle in the way of any improvement of the kind suggested above in view of the high level of the bank rate rendered necessary by the very difficult position of international finance and Indian exchange.

### **Industrial Depression and India.**

It has become a commonplace that the range of the present depression is world-wide. It embraces within its sphere rich as well as poor countries, manufacturing as well as agricultural countries. It is now our task to enquire what the reactions of this depression are on our country. Everybody knows that the economic structure of the country has been severely shaken by it. It remains for us to assess the extent and character of its effect.

One of the characteristics of this depression has been that agricultural commodities have fallen in price to a larger extent than manufactured goods. India being mainly a producer of foodstuffs and raw materials it is obvious that the goods which she produces and exports have fallen in price more than those she imports the bulk of which are manufactured goods. Thus under the conditions of the present depression the terms of international exchange are against our country, since for every unit of our exports we get in return less than the normal amount of manufactured goods.

Let us see why agricultural commodities have fallen in price so heavily. It has been remarked that rationalisation has been applied so largely to agriculture recently that the markets of the world have been glutted and prices have fallen catastrophically. In this connection the backwardness of India makes the position particularly serious. Whereas as a result of improvements in production every unit of labour elsewhere applied to the production of agricultural commodities secures a large return in goods, there is not the same advantage for India on account of primitive conditions of production. But in the matter of prices there

is a single world market price for most of the staples. Indian goods have to sell therefore at the same price as non-Indian goods of the same quality. Since the achievements of science have made the world really small, the inappropriateness of India following backward methods while the rest of the world is advancing becomes manifest. Thus the peasant in the United Provinces and the Punjab has to sell the wheat he produces at the same price at which that of Australia, Argentina and Russia produced under conditions of rationalised agriculture has to sell.

It is a pertinent question to ask why the peasant should suffer if prices of his product fall. There need not be any suffering if all his obligations including the goods he buys and his debt burden are reduced in price correspondingly. The trouble is due to the fact that depression affects different goods in different degrees, commodities differently from services and leaves untouched contractual obligations expressed in terms of money. Herein lies the difficulty. In the case of the peasant in India almost all the main products of the agricultural industry have fallen very heavily in price while the taxes he has to pay fixed in terms of rupees have remained the same and his debt burden in money remains unaltered. As regards cost of cultivation it may be said that the typical peasant brings to bear on the cultivation of his holding the labour of his family besides employing the requisite number of labourers for necessary operations. The cost of the labour he employs may be incurred in kind or money, according to the crop and locality under reference. The adjustment is readily effected in so far as payment is in kind. In respect of payments made in money they take time for adjustment but in India since wages show a great tendency to correspond to the minimum of subsistence particularly in agricultural areas the tendency to adjustment to a lower level of prices does not present great difficulty. As regards the necessary commodities he purchases, most of them like cloth have fallen in price though some other commodities like salt and kerosene oil have risen. The debt expressed in rupees becomes more burden-

some and when one realises that rural indebtedness is heavy, one may have an idea of the distress it involves for the ryot. If we compute the interest on debt at about 10 per cent only, the annual charge for interest amounts to about 90 crores of rupees nearly thrice the land revenue burden.

Taking the lot of labour with reference to the present depression it may be said that labourers on the whole gain, since their money wages represent more commodities on account of the fall in prices. But caution is necessary before we jump to conclusions. Though it is true that those labourers who remain in full employment at the old money wages do gain, in agriculture as has been pointed out labourers are paid in kind for most operations and where paid in money there is a fairly rapid tendency for adjustment to be effected. It should, however, be noted that agriculturist labourers do not get employment throughout the year and in times of depression optional undertakings like improvements in land, are postponed or reduced to the narrowest limits. This involves reduced employment and therefore reduced earnings.

As for industry the reduced purchasing power of the agricultural population combined with the fall in the prices of manufactured goods has reduced manufacturing industry to serious straits in an atmosphere which has increased the prevailing rates of interest. The unemployment figures in India are not available and the high figures of unemployment in manufacturing countries have not their counterpart in this country. For in a country peopled mainly by peasant proprietors economic distress due to depression takes the form of a big fall of prices leading to agriculture becoming unprofitable during the short period. In manufacturing countries, on the other hand, the losses made by entrepreneurs induce them unlike among peasant proprietors to restrict production which leads to visible unemployment.

Turning next to the reaction of the depression on currency

and finance, one feels that the effects have been very harmful. While many of the sources of revenue, like customs, income-tax, excise, stamps, etc., shrink under conditions of depression the expenditure of Government being to a considerable extent contractual in character offers a great resistance to retrenchment. It may be urged from a theoretical point of view that apart from external obligations in gold which become burdensome in kind as a result of a fall in prices, depression need not necessarily lead to distress provided adjustments of prices, wages and debt burden are affected. In the modern money economy such adjustments are very difficult for a number of reasons. Many obligations like debts are contractual in terms of money. The prices of different commodities move down with different velocities and the price of services reacts very slowly to a fall in prices. These elements of friction are the causes of distress due to depressions.

The currency situation in India has undergone a transformation on account of the depression. The Governments of countries like Argentine, and Australia, who produce foodstuffs and raw materials, depend on continuous imports of capital and have to meet external obligations on account of interest, are in a similar position to India. They had to go off the gold standard. In India the Government was very hard put to it in the matter of maintaining the exchange value of the rupee. Even as going off the gold standard in the peculiar conditions of the working of that standard recently brought relief to England the divorce from gold of the rupee has had a beneficial effect on Indian economy. The controversy over the exchange value of the rupee has almost lost its meaning, now that the pound sterling is depreciated in terms of gold. The value of the rupee hovers about only 13d. gold at present. The real burden of the national debt of India, sterling and rupee, has been reduced considerably. The currency question throughout the world is in the melting pot and the currency system of India even as that of every other country in the world is sure to be organised with reference to the economic situ-

ation of the country as a whole thus safeguarding the general and permanent interests of the country.

### **Economic Reconstruction.**

Perhaps no question is of greater moment at the present day than the determination of a plan of social and economic advance for the immediate future of our country. That the country's economic condition is grave will be obvious by a reference to the various criteria of economic progress. The main criteria are the following:—agricultural output per acre and per agriculturist; the average peasant holding; fragmentation of holdings, rural indebtedness; the pitch of interest rates; overdues in the co-operative credit movement; deposits in primary societies; wages of agricultural labour; wages and housing conditions of industrial labour; the part played by organised industries; paid-up capital of joint stock companies; bank deposits; marketing organisation; the composition of the export trade; the *per capita* export and import trade; direct *versus* indirect taxation; state expenditure on welfare services; birth and death rates; infantile mortality; average duration of life; illiteracy; extent of technical education; and middle class unemployment. When attention is directed to the above a sense of the great distance that we have yet to travel before a fair measure of material welfare accrues to our general population is borne in upon us. The contrast that our economic conditions present to those of the advanced countries of the world induces in us a sense of humiliation. Since the middle of the 19th century countries like France, Germany and Japan have witnessed such rapid economic progress that till recently an increasing population was being supported on a rising standard of life. It is a matter for examination why Indian economic progress did not run on parallel lines with that of the rest of the world. In the first place, India is a continent and the very extent of the area was a factor which may be said to have militated against rapid and sustained progress. Secondly, Indian attitude towards

life has not been marked by a decisive predilection in favour of material progress which stood in the way of a persistent endeavour towards improved conditions of life. Thirdly, the caste organisation of society and the marks of a tribal rather than national attitude that still persist in some measure, whatever elements of real value they may embody, are not helpful towards the organisation of economic life on modern lines and an increase in the production of wealth. Fourthly, the economic condition of India before the Industrial Revolution may easily bear comparison with the contemporary economic condition of most of the advanced countries of the present day. Indian artisans then commanded a dexterity and deftness of fingers almost unequalled; and, on the whole, a healthy balance was maintained between agriculture, industry, the fine arts, banking and shipping. Since the Industrial Revolution, however, Indian progress has not been marked by the characteristics that have made the economic organisation and life of Western Europe, the United States of America and Japan what they are to-day. The social and economic organisation of the country did not display the elasticity and power of adaptation which was required by the changed conditions ushered in by the Industrial Revolution. Fifthly, the British rulers of India were nurtured in traditions that did not look with favour on either state enterprise or fiscal protection. Thus private initiative was, on the whole, a broken reed and the state apart from building railways and constructing irrigation works did not push forward any positive schemes of economic amelioration. The application of science to agriculture and industry which was making rapid strides in the Western world made little headway in India. The operation of all these factors has resulted in about 73 per cent of the population depending on agriculture, 90 per cent living in villages and 1·2 million persons only employed in organised industries. The methods of agriculture practised are so primitive and the soil has been rendered so poor that the average outturn of wheat per acre is  $9\frac{1}{2}$  bushels, perhaps the



lowest in the world. Indian economic life is thus not marked by what may be considered the characteristic modern features, viz., the application of science to agriculture and industry, and a fairly high standard of life of the bulk of the people.

The articulate classes in the country have during the last few years been taking increased interest in economic questions. The unemployment of the educated middle classes which is casting its dark shadows over the Indian life has invested the enquiries into economic questions with a new significance. The gaping contrast between political aspirations and economic realities has spurred thoughtful minds in the direction of making earnest endeavours towards improving economic conditions. The gigantic experiment that is being carried out by Russia having for its object the industrialisation of the country by means of deliberate planning has created a profound impression on thoughtful minds. Even in countries which have been the citadels of private initiative the State is taking upon itself new functions with a view to strengthening the industrial structure and conscious social control has been playing a progressively increasing and beneficial part. The balance of the economic structure in India leaves much to be desired and Indian poverty is such a stubborn fact that earnest minds have been set thinking whether a deliberate planning out of the immediate economic future of the country is not of urgent necessity. Whereas in other parts of the world the production of wealth is growing rapidly and a steadily increasing proportion of the national income is devoted to the consumption of comforts and luxuries, in India, on the other hand, there are not indications pointing to an increase in production more than commensurate with the increase in population. In these circumstances it is no matter for surprise that public opinion is awakening to the need for a conscious economic policy on the part of the State. While India is slowly making efforts for emerging from mediæval into modern economic conditions political progress in the direction of the introduction of democratic institutions is being achieved. A

survey of the economic development of countries like Germany, France and Japan indicates that a growth of national solidarity went hand in hand with and facilitated economic progress. The increase in the production of wealth, the growth of applied science, a rise in the standard of life and the need for skilled labour were among the causes that created the conditions favouring the rise of democracy. Thus it may be said that economic progress went rather in front of democracy and stimulated its growth. In India we are faced with the prospect of laying the foundations for modernising the economic organisation of life in an atmosphere of democratic political institutions. This consideration should help to quicken the sense of responsibility of the leaders of political parties who should realise that struggles in the political arena ought to be conducted in such a manner that the sense of nationality is rapidly promoted and the economic programmes that may be determined upon in the general interests of the country should be allowed to be worked out in the most methodical and efficient manner. This obligation is all the more of a compelling character since the resources of the people are limited and since taxable capacity has already been strained almost to the breaking point.

A realisation of the gigantic nature of the problem that confronts the country is essential if support is to be forthcoming for suitable measures towards remedying the situation. It is no less than providing elements of decent life for about 350 millions of God's humanity, one-fifth of the human race. The condition precedent for economic progress is a distinct realisation on the part of the leaders of the people that economic progress is not only desirable but an urgent and overwhelming necessity. Secondly, there ought to be a general conviction that it is possible and practicable to adopt measures and devise courses of action that will have the happy result of promoting material welfare. Thirdly, whatever customs and practices stand in the way of economic progress should be subjected to a close and searching examination and public opinion should be convinced of the necessity for strong

measures for their abolition. Fourthly, there ought to be the readiness to find the requisite money for carrying out policies that would promote material welfare, due care however being taken to secure that the governing consideration in the application of such money should be efficiency. Fifthly, an organisation has to be created which will be entrusted with the work of devising suitable measures of economic amelioration. In this connection we are happy to record that the Government of India recently invited Sir Arthur Salter of the League of Nations to report on the organisation of Economic Advisory Councils for India. His report was published a few months back and deserves thoughtful consideration. The prosperity of nations is so much bound up with the proper solution of complex economic problems that most advanced countries like England, Germany and France have felt the need for such agencies and have made provision for them. A body which can take a view of the economic problem as a whole and consider it in relation to other spheres of social life as well as particular economic questions is an urgent necessity, if economic progress is to be steadily pursued and waste is to be avoided. In the special circumstances that surround political evolution in India at present, the overmastering need for an authoritative and competent body charged with the discussion of important economic questions and formulation of suitable measures is obvious, if economic improvement is to be progressively achieved without being interfered with by the play of party politics.

Let us sketch briefly some of the main problems that will have to be investigated by the proposed Council. Of foremost importance is the condition of the agriculturist. Rural indebtedness is now estimated to stand at about 900 crores of rupees. The recent catastrophic fall in prices has added tremendously to the real burden of such indebtedness. It acts as a dead weight on agricultural production. Though interference with the normal operation of economic laws may sometimes let loose forces disastrous in their operation the case for a fresh examination of the

relations of debtors and creditors in our countryside may be of a compelling character. It should be one of the first tasks of any Economic Advisory Council to take in hand this problem, examine it in all its bearings and suggest suitable and, if necessary, bold measures for dealing with it.

It may not be out of place to point out that the indebtedness referred to has grown largely out of social and moral causes which require energetic handling if the peasant is to turn over a new leaf. Here comes the importance of devising methods which will raise his standard of life. All the available agencies including Government and leaders of public opinion must be infected with an enthusiasm for such a cause. It will be one of the foremost tasks of the Council to devise expedients of different kinds towards achieving this end. Non-Official Councils will have to be organised from the village upwards and officials should also be in close association with them in an advisory capacity. The executive authorities of the district should be in friendly and active touch with such organisations and all the departments of Government should take a lively interest in measures of amelioration and help towards creating an atmosphere favourable for progress. This will help to form the much-needed public opinion in favour of progressive policies. Methods of procedure should be worked out and devices adopted so that the members of the village councils would take a lively interest in self-improvement of different kinds, display a readiness to tax themselves and maintain a record of the different aspects of the economic life of the village bringing it up to date.

Next comes the colossal task of bringing about the application of science to agricultural and industrial production. The question whether legislation is necessary for the purpose of securing consolidated holdings requires examination. The co-operative movement is not functioning properly on account of the absence of the true co-operative spirit. The weak points should be searched out and remedied. The movement should be broadened and

deepened. The adoption of measures with a view to the creation of a healthy balance between agricultural and industrial production in the country should be one of the prime tasks of the Council. There are various other questions to be investigated like the middle class unemployment, the balance between different kinds and stages of education, the extension of irrigation facilities in the absence of safeguards for improved methods of cultivation being adopted, the reactions on economic progress of an increase in population, the economics of public health, the incidence and distribution of taxation, Central, Provincial and Local, Government's relation to the money market, purchase by Government of private railways, the contribution by Railways to the Treasury, State policy in regard to electrical development, the creation of warehouses, the operation of railway rates and the development of canal traffic.

It may be urged that questions like the above have not been neglected thus far and the reports of various Committees and Commissions appointed to investigate and report on specific economic questions attest the earnestness of Government. The weak point in the system consists however in the circumstance that there is no authoritative and competent body to review each economic problem in relation to other economic problems and the whole sphere of social life. Apart from this there is the disadvantage involved in the fact that a period of agitation has necessarily to elapse before a Committee may be appointed to deal with any question. The treatment thus has a tendency to become sporadic, fragmentary and imperfect. This perhaps explains why the reports of the various Committees have not been implemented by the Government of India. A permanent body with a continuous tenure dealing with the economic life of the people as a whole and specific economic questions, is likely to furnish the requisite co-ordination and continuity of policy, to awaken a new sense of responsibility on the part of the Government as well as the people and to create necessary traditions.

While developing plans for economic reconstruction one cannot help reflecting on the difficulty likely to be experienced in securing the necessary finances. But it should not be forgotten that the expenditure incurred in this connection is on a par with that incurred in the reorganisation of a business which has drifted into employing sloppy methods and using antiquated machinery. Only great care should be taken to secure that the interests of efficiency receive paramount consideration in the matter of the constitution of the Council. Financial stringency ought not to stand in the way of the organisation of an institution with the proper functioning of which is bound up the rapid expansion of the economic efficiency of the people and the augmentation of the sources on which public revenues depend.

Any avoidable delay in this respect is likely to have unfortunate results. The earnestness of keen men combined with the sense of frustration induced by unsatisfactory economic conditions is producing a number of fertile suggestions for development on different lines like a five-year plan for education, a rapid scheme of sanitary improvement, and State promotion of industrial banks. In the absence of a co-ordinating agency inspiring confidence by its efficiency and authoritative character, there is the danger of the State being stampeded into incurring expenditure on particular schemes which for lack of development of correlated schemes may fail to yield the expected results. Given satisfactory Economic Councils, given knowledge, courage, a sense of sacrifice and above all a spirit of good-will, the arrears of economic development that have accumulated may yet be cleared up in a short period and the vast population of this land will come into the possession of a rich life and enjoy material welfare of the kind which is open to the population of advanced countries like England and Japan.



# REPORT OF DISCUSSIONS ON PAPERS

PAPER BY J. C. SINHA

## DISCUSSION ON CENTRAL BANK CONSTITUTIONS

Principal Tannan stated that the question as to the form which a Central Bank in a country should take depended very largely upon its conditions and it was therefore not right to assume that as the Central Banks in certain countries were Shareholders' Banks the Central Bank to be started in India must also have its capital subscribed by shareholders or *vice versa*.

In any case a Central Bank in a Gold Standard country must have gold resources. But where are the gold resources required for the Reserve Bank of India? Since the time the Hilton-Young Commission reported gold and gold securities belonging to the Paper Currency Reserve and Gold Standard Reserve have gone down. Perhaps, if an appeal is made to the fair sex of this country by men like Mahatma Gandhi for the loan of a certain amount of gold, it may be possible to start at an early date a Reserve Bank in India which is absolutely necessary.

Prof. Kale said India need not wait indefinitely in the matter of a Central Bank. In several countries reserve banks have come upon the top of a wave of a democratic and a national movement. A reserve bank must serve general national purposes and must exercise national control over the finances of the country as a whole. People suspect that the proposed Indian Central Bank may be run in the interest of non-Indians as the question of safeguards is associated with it. It must really be in the interests of the people at large and must, for instance, help the co-operative movement. The working of the central bank, in short, should be such as would suit the country's peculiar conditions. India need not follow the example of any particular country, and its constitution and working ought to satisfy the opinion and the needs of the public and the Government which it is intended to serve.

Prof. Ramachandra Rau said that the constitution of the Central Bank must be based on the environmental conditions of the country. If a Central Bank is established in India then many of the banking difficulties would be solved. Remember that reserve is after all needed to pay international indebtedness. For funds you must appeal to the



League of Nations or the Bank of International Settlements. The United States of America has declined the appeal of the Government of India for funds. Save not the gold resources and then say we have no gold resources for starting a central bank is according to Prof. Rau the present policy of the Government of India. As in the case of the recent lowering of reserve ratio by the Australian Commonwealth Bank a needed adjustment can be made by the Reserve Bank once it is started.

Prof. Kapoor remarked there was no objection to having a shareholders' bank. All that was necessary to safeguard was that a large majority of the shareholders were Indians. For the rest we should depend on our ability to make the pressure of public opinion most effective. The present Government is not a responsible one and may not be responsive to the public opinion either. It is necessary therefore that the bank should not be in any way under any effective control or influence of the Government. And that public opinion should be at least so strong as to make the Directors responsive to the wishes of the shareholders and the shareholders in their turn responsive to the wishes of the people.

Under the new constitution we expect the Government to be a responsible one. If that comes about we are expected to make the Government amenable to public opinion and Prof. Kapoor did not see why we should not also be able to make the directors of the bank equally deferential to public opinion.

Prof. Chablaní took exception to the view that the establishment of a Central Reserve Bank in India should be postponed, because there is insufficient gold in the coffers of the Government of India. The gold resources even at the time of Hilton-Young Commission were not sufficient for a gold bullion standard. If the gold resources of the Indian Government in September 1931 were less than their reserves in 1925, so were their liabilities arising out of note-circulation and rupee-circulation. One of the primary functions of a Central Bank is stabilisation of internal price-level, and at no time was such an institution more necessary than now, when India along with many other countries was off the gold standard. The Central Bank could avoid seasonal fluctuations of exchange by means of its gold resources and external credits, and pursue a policy of price stability by means of its control over currency and credit, allowing the shock of changes in the external price-level to be absorbed by exchange. Prof. Chablaní remarked that it was no use saying that the case for Central Bank in India was now less strong than it was in the days of Sir Basil Blackett, for only a Central Bank can pursue successfully for any length of time a policy of "Free Rupee" with price stability within India.

Dr. J. C. Sinha said that the prices of agricultural goods and raw materials had fallen much more than the prices of manufactured products. Hence it was difficult for a debtor country like India whose exports consisted mainly of raw materials and agricultural goods, to meet her foreign obligations during the present depression. Replying to Mr. Chablani, he observed that a sufficiently high reserve of the Central Bank was required, not so much for maintaining the internal convertibility of our currency as for meeting our obligations abroad. To Dr. Dubey's contention that a smaller reserve was necessary because the total value of our foreign trade was now less, Dr. Sinha referred to inelastic items like Home Charges and said that the fall in the value of exports and imports had certainly not made it easier for us to meet our foreign dues.

Replying to Mr. Ghosh, he said that so long as there was such a clash of sectional interests, a bank of the mixed type was the most adaptable to our conditions. To Mr. Kapoor's plea for a shareholders' bank, he remarked that if the bank was not effectively controlled by Indian public opinion, a shareholders' bank would not inspire more confidence in the mind of the Indian people than the present Imperial Bank. He agreed with Prof. Kale that the starting of the Central Bank might benefit the Indian agriculturist but this did not mean that the present time was opportune for starting the bank in spite of the numerous difficulties that lay in its way.

The President said that though the establishment of a Reserve Bank may not be necessary for the maintenance of the gold parity of the currency in view of the uncertainty surrounding the future of the Gold Standard the need for such an institution is great so that the banking system of India which is at present marked by waste may be nationalised.

## DISCUSSION ON CAN INDIA BECOME A CREDITOR COUNTRY AND A BOARD OF NATIONAL INVESTMENT FOR INDIA?

PAPER BY MESSRS. B. R. RAU AND D. L. DUBEY.

Prof. Chabiani said, there is no evidence given, by Prof. R. Rau, of India becoming a creditor country beyond a few facts indicating flight of capital, which may be due to the foreign capitalists' lack of confidence, to nervousness of the Indian investor because of political conditions, or to heavy taxation imposed in recent years. Prof. Rau's belief that India can become a creditor country rests on the alleged "real increase of money savings," but this is not supported by the facts brought out by the Central Banking Enquiry Committee, which show that banking deposits have declined since 1920 and remained stationary between 1924 and 1928, gold imports have fallen since 1925, and the net issues of Postal Cash Certificates have decreased substantially since 1925. The position must have changed for the worse since the catastrophic fall of prices in 1929 and 1930. The items Nos. 3, 4, 5, 6 and 7 in Prof. Rau's first table prove that the bulk of our so-called export of capital are payments towards our foreign liabilities. Two of the conditions laid down by Prof. Rau, viz., successful industrial development and the full gold standard regime do not appear to be essential to the position of a creditor country, for a country can lend by export of raw materials as much as by export of manufactured good and gold. Nor can one accept readily Prof. Rau's suggestion that Indians should invest in Asia as there was not much economic security in most of the Asiatic countries outside India.

Prof. S. K. Muranjan said that a Board of National Investment—as proposed—would divide the control over national investment between Government on the one hand and the banking system on the other. What is required to-day is a unitary direction of investment so as to secure stability of employment and business conditions. This may require at times control over investments abroad and investments within—whether by a system of licensing flotations or penal taxation of incomes from abroad or by appropriate promotion and underwriting activity of banks. At times, investment by the State and a consequent suitable monetary response by the banks may be necessary to lift a depression. From all these standpoints, it appears that a State-Bank alone can meet the conditions of the case. The case for it becomes overwhelming when the trading and industrial needs of a

backward country like India and the need for protection of the ignorant and shy investor are taken into account.

Prof. Ramachandra Rau asked—What is the relation between gold standard and India becoming a creditor country? It is this. Without an able management of the gold standard India will not be a creditor country. A gold standard gives us comparative stability of exchanges without which external investment of capital cannot take place. India must possess constructive capital goods to become a creditor country. Hence the needed improvement in the industrial structure of the country.

Again short-term investments will not make India a creditor country. The tables Nos. 3, 4, 5 and 6 referred to by Prof. Chabiani indicate the way in which banks can invest abroad. The tables, moreover, indicate the way in which capital inflow and outflow is taking place. They do not merely indicate debtor and creditor relationships alone.

## DISCUSSION ON LAND MORTGAGE BANKS

PAPER BY M. K. MUNISWAMY.

In Prof. Kale's opinion the motto to follow in India at present, in the matter of Land Mortgage Banks is to 'hasten slowly.' Some steps have indeed to be taken to redeem the old debts of the cultivators. But here we must walk with wary steps as there are difficulties in the way of Land Mortgage Banks which must be carefully overcome, and these relate specially to the possibilities of the return of the loans in time. Long-term loans have been granted also for purposes of improvement of land. But the important thing even here is to see that the loans have been used for the purpose for which they are granted. The agricultural class in India is very hungry in more senses than one. If cultivators get loans to-day from any quarter they are indifferent as to what will happen in the time of their sons or grandsons. If the borrower is called upon to repay the loans in his lifetime, then alone will he feel a sense of responsibility and use loans properly. This is one of the arguments for not making the period of the loan too long, on the mere analogy of other countries.

Then again, when land is divided by partition among sons and grandsons, the income from it will go down and the hopes originally based on the amount of productivity may not be realized. These are some of the difficulties which should be taken into consideration in fixing the period of loans.

Principal Tannan said that in spite of the apparent difficulties in the way of the Land Mortgage Banks, he was not wholly pessimistic about their success in India. He too, did not think it easy to run Land Mortgage Banks successfully but thought that such institutions were needed in the best interests of the country.

It is true that the Agriculturist is ignorant, but the question we ask is, should we wait till he is educated? Can any one prefer the farmers to go on paying 30 to 40 per cent interest to the Moneylenders as against 10 per cent to Land Mortgage Banks? Therefore it is desirable that the Land Mortgage Banks should be introduced. The farmer must, however, be educated and made to realise that the loan he has taken is to be paid back.

Prof. Chablani said that it was very necessary to realise the difficulties in running successfully Land Mortgage Banks under the existing conditions. In the first place, land mortgage banks run on safe lines will have a very limited scope for legitimate business in the

rural areas of most of the provinces. About 30 to 40 per cent of the loans incurred by agriculturists are for seasonal purposes while 10 to 20 per cent more are for wasteful purposes. No long-term credit is, therefore, required for over 50 per cent of the amount borrowed. About 6 to 10 per cent of the total indebtedness of the agriculturists is due to loans for purchase of land, which at the present inflated value of land yields much less than the most reasonable rate of interest on which long-term credit can be available. There is very little demand for loans for the improvement of land; and whatever little demand exists, is satisfied by loans advanced by Government at very low rates of interest. Some of the agriculturists are again so heavily indebted that they are not in a position to **pay** interest at even 8 per cent for the purpose of redeeming their land. Besides, the moneylender advances at 6 to 12 per cent rate of interest mortgage loans up to a higher proportion of the value of land than Land Mortgage Banks can safely do, and the mortgage area in several Tehsils is already mortgaged for a higher amount than any land mortgage bank can safely lend. Apart from this limited field, there are certain difficulties created by Acts like the Land Alienation and the Hindu Law of Inheritance, which deprive the creditor of a secure security for his loans. Unless these laws are amended, it is impossible to work Land Mortgage Banks in India. The most important source of long-period funds in India is the growing amount of Insurance Fund, and one does not see why the Central Banking Committee has turned down the proposal of one of the Provincial Committees to permit a combination of Insurance with mortgage loans business in India.

Mr. R. R. Pawar said the custom-bound individual agriculturist is so ignorant of new ways as to make the case for Land Mortgage Banks like watering old withered trees and this will continue so long as he is not improved. The farmer must be educated on lines suited to his mode of life and to his industry.

Again the method in which revenue is collected must be radically changed according to the needs of the agriculturists.

Principal J. W. Thomas suggested that the main object should be to reduce the burden of indebtedness. In a recent enquiry into the conditions prevailing in a new canal colony village in the Punjab, the causes of indebtedness were found to be as follows: Five, litigation in one form or another, two, extravagant living, one, to purchase cattle, and one, where a man had borrowed money in order to purchase eleven wives.

Only one of these cases could be regarded as borrowing for production purposes. What would be the use of a Land Mortgage Bank to the man who was regularly borrowing for new wives unless for the

purpose of mortgaging some of his wives! He further stated that there did seem to be a danger at present in India of students relying too much on the experience of other countries. While it was highly desirable that study should be made of the conditions obtaining in other countries, yet it should not be forgotten that the conditions **did** vary in different countries and in any adoption of things that have been successful abroad, whether land mortgage banks or anything else, care should be taken to see that they conformed to the conditions of India.

Professor Beri said the competition of Government with the Land Mortgage Banks in the Money Market could not, as was alleged, act as a hindrance to the development of such Banks. On the other hand, Government by conferring their blessings on the Land Mortgage Banks by guaranteeing and purchasing the debentures issued by them could undoubtedly ensure their success. In view of the strong preference in India for investment in land, such debentures, if issued by a Provincial Land Mortgage Bank, would be readily purchased by the public.

As Rural debt, estimated at Rs. 900 crores by the Provincial Banking Enquiry Committees, was increasing at a high rate, and the cumulative effect of the standing debt was intensifying the difficulties, delay was dangerous and it was quite essential to take immediate steps to tackle the problem of old debt redemption.

A preliminary scrutiny of rural debt by Rural Debt Commissioners was quite necessary for the efficient working of Land Mortgage Banks, which should restrict their facilities only to the solvent ryots and landlords. Others should be dealt with under a simple Rural Insolvency Act as suggested by the Agricultural Commission.

Land Mortgage Banks should take some precautions in order to prevent a misuse of their funds, say, by paying directly to the **Sahukar** the money due to him on behalf of the borrowing members.

The adoption of the co-operative organisation was urgently needed to make the Land Mortgage Banks a success.

Dr. Pagar said thus, Mr. President, I hope my brother Economists would not disown their professional brothers engaged in solving practical administrative problems. I am grateful to you for giving me this opportunity of explaining what we are doing in this line in the premier State of Baroda. We had an idea of starting a Land Mortgage Bank five years back, but on inquiry it was found that only 10 per cent of the farmers possessed the repaying capacity after satisfying their current needs.

We, however, made a beginning by way of liquidating old debts of a few members of some of the selected Cooperative Societies, through the District Cooperative Banks. Government have lent about

Rs. 3½ lacs at 4 per cent to the District Banks who in turn lend to the Societies, the members of which receive the money at 6 per cent. The District Banks, however, lent these funds for five to seven years only and in some cases this period was found to be very short and the borrowers seem to have resorted freely to the moneylenders for repaying the Bank instalments by creating second mortgages.

Land Mortgage Banks thus may involve the agriculturists more in debt than they are now, but still it would be unwise to share the pessimism of some of the previous speakers. Information should be gathered from all parts of India and then an opinion should be formed upon it. I am of opinion that each Province and State in India should organize a Bank on the model of the Credit Foncier of France, which would combine long-term loans to Agriculturists as well as to local bodies and industries.

Professor Kaji was very doubtful about the success of Land Mortgage Banks under the present conditions in India. When Co-operative Credit Societies had not yet done the great good that was expected of them in the course of the last twenty-five years, it was very doubtful whether land mortgage credit on a co-operative basis would succeed in solving the problem of rural indebtedness. The whole problem recently engaged the attention of a Joint Committee of the All-India Co-operative Institutes' Association and the Indian Provincial Co-operative Banks' Association and the Committee rightly came to the conclusion that it was no use embarking on a programme of starting Land Mortgage Banks as a solution of the indebtedness of the agriculturists. For land improvements, long-term credit was essential: but for redemption of old debts, he was doubtful whether the conditions in rural India were suitable enough. The efficient working of Land Mortgage Banks presupposed certain conditions and unless those conditions obtained in India, Land Mortgage Banks would be a doubtful proposition. The experience so far in the areas where such banks were started was not very encouraging. The most important conditions were two and they were: (1) Profitable agriculture: and (2) Intelligence enough on the part of the agriculturists to use the credit that they would obtain from their credit organisations. The prosperity of agriculture in his opinion was bound up, not so much with the organisation of credit institutions, whether for short term or for long term, as with an efficient co-operative marketing organisation and with the development of cottage industries and subsidiary occupations. Mere credit facilities in the hands of ignorant, illiterate and fatalistic people would be rather a curse than a blessing and would increase indebtedness rather than diminish it.



Professor Kaji, therefore, advocated a careful survey of different regions and suggested that experiments with Land Mortgage credit should be tried only in those areas where the survey showed the existence of the essential conditions for success.

The President said rural indebtedness is so heavy that there are apprehensions that the whole agricultural enterprise stands in danger of liquidation. It is true that sufficient guidance has not been given to the agriculturists in organisation and co-operation. Prof. Kaji does not believe in Mortgage Banks and has suggested co-operative marketing organisation as a remedy for the evil. But he should bear in mind that to achieve success in this line is more difficult than in working successfully Land Mortgage Banks.

## DISCUSSION ON VARIANCE OF IMPERIAL BANK ADVANCES

PAPER BY H. SINHA.

Prof. S. K. Muranjan said this paper was an illustration in statistical method and as such the absence of a definite economic proposition in it made criticism very difficult. Professor Muranjan paid a warm tribute to the author for the enormous labour and extreme care with which the paper was prepared.

Table No. 4 makes it clear that stable conditions had been reached by the year 1924-25. But, unfortunately, England and other countries made use of these stable conditions as an argument for introducing into the situation the greatest element of instability—namely, stampede into the Gold Standard—with the subsequent disaster known to us all. Prof. Muranjan criticised the author for not using the true mean for counting the deviations and for not eliminating the cyclical trend in matter of fact, for assuming by the use of constant mean that there is no such trend. Dr. Sinha, however, differed from this opinion and held that the new method did not require these steps.

## DISCUSSION ON LABOUR PROBLEMS

PAPER BY DR. HASAN.

Prof. Muranjan pointed out the inconclusiveness of the paper. He admitted that the labour turnover was unusually high in this country but 'it is no use,' he said, 'to put the whole blame on the labourer, or to mourn over it.' Huge turnover may be the result of adverse economic conditions and as such a very healthy psychological or physiological reaction. An analysis, of course, is essential along the following lines.

Is the turnover concentrated towards week-end? If so, it may be due to fatigue the causes of which are legion. Is it sporadic? If so, what part of it is due to sickness? Is it concentrated in particular seasons? If so, agricultural needs or climatic conditions, etc., may explain it. Is it more pronounced among men or among women? If in the latter, it will be eradicated as easily as women themselves (laughter). Is it more marked in the higher as compared with lower ranks? If so, it may be due to vocational misfits. Is it more present in heavy or in light industries? This again requires a study of particular industrial conditions. Is it more prevalent under one system of wages as against another? If so, we shall have to study not only the ordinary system of time-wages and piece-wages, but the more elaborate systems propounded by Taylor, Hasley, Towne and other cranks, faddists and economists (laughter).

In conclusion, the speaker warned the audience that the labour-problem must be considered as a whole in the aggregate and that the aid of the expert statistician and the Industrial Psychologist is necessary before the pedestrian economist can break his discreet silence and pronounce final judgment.

Prof. Kapoor complimented the writer by saying that his aim in writing the paper was laudable, but the question was how to bring about the effect that he desired? The writer followed the orthodox line of argument. Raising the wages does not necessarily improve the conditions of labour. The poor people are ignorant and do not realise their responsibilities. If wages increased they multiply faster and the standard of life, if in any way improved by the increase in wages, again relapses in its old position. This is the vicious circle. The only way out of it is to teach the labourer to spend his wages properly. Education is the only method. Other ways are also suggested though they are looked upon with suspicion.

One such way is to pay the wages not in money but in kind. This is called the Truck-system, but it has been tried and found wanting.

Another way is the welfare work. The motives behind it are, however, questioned. The employees feel that this is undertaken to keep the wages low.

The speaker's own suggestion was a combination of the two with special precaution to avoid the defects of both. It was that a part of the wages should be paid to the labourers in money and the remainder to the Trade Unions which should spend them in the interest of the individual labourers. The use of the machinery of the Trade Unions avoids the suspicion against the employers and yet that portion will be spent prudently in the interest of the workmen. By paying a part in money the labourers shall have some cash in their hands. The Trade Unions might be invited to appoint their own inspectors who would pay surprise visits to the factories and as a result would recommend from among the labourers for special prizes and rewards those who kept their own clothes clean and were punctual, etc.

The speaker again urged the necessity of educating the work-people in the art of consumption. He did not expect much from the work of the charitable people helping labourers in a philanthropic spirit. That, he thought encouraged indolence and the habit of dependence, etc.

Dr. Nader, in the course of his talk on Dr. Hasan's paper, said that the Indian labour was watching how the All-India Economic Conference was going to solve the labour problems, and expected not mere academic resolutions but some practical contribution, and that Dr. Hasan had happily struck the right chord when he suggested that the service of practical economics to labour was to give a better human and social life. "A higher standard of living," continued the speaker, "necessarily involved this. A beginning must be made; and that beginning cannot come from labour. **Nemo potest dare quod non habet.** Labour's present low standard of living drags them to a lower standard. The destruction of the poor is their poverty." The speaker called on the economists, the employers and the favoured class to explore all the avenues of what Marshall calls "the social possibilities of economic chivalry" and said that it was the only lever then available to increase the real wages of labour and repair the social and national loss incurred by their low standard of living, and that a mentally, morally and socially uplifted labour could easily adopt the rationalized form of expenditure and enter into the happy cycle of prosperity suggested by Dr. Hasan. "The learned doctor," continued the speaker, "asks us not to be degenerated ascetics, but to consume more and more comforts; but, it does not radically solve the problem of raising the standard of living from labour point of view. More consumption will bring more work and undo unemployment; but will it give higher wages

and a better standard of living? If not we perpetuate the present low standard of living. Why to speak of comforts when millions do not get enough to eat? If the favoured few indulge in comforts it will increase the contrast of the classes and the masses and aggravate the mental agony of the workingman who plods all day long in making those comforts yet tastes none of them. For heaven's sake leave comforts alone; if we have given him enough of the necessities he needs we have done much. The speaker deprecated accusations against labour and said that "Nowhere else, as in India, labour is more sinned against than sinning. Our once useful social and economic systems have been keeping them in galling fetters long enough. It is time that we do justice to them. We are not justified in crying down the religious sentiments of the labourers if they do not ally themselves to fatalism. Religion is a silver lining in the labour's dark cloud. It is the only consoling factor in the workingman's hard lot: it makes virtue of necessity. It raises his mental, moral and social outlook without which economic uplift will have no foundation. The speaker cited number of instances of special services that have important economic bearing on the raising of labour's standard of living and concluded with a spirited appeal to the Bombay economists to take advantage of the opportunities afforded in their premier city and give a lead in it to all India.

Prof. Karve accepted the views of Dr. Narayanaswamy that force was no criterion for the settlement of industrial differences and that bodies like conciliation and arbitration boards should be started in India to settle and, if possible, to forestall labour disputes. He pointed out, however, the necessity of having a well-organised trade union movement as a preliminary and as an accompaniment of any scheme of industrial conciliation and arbitration. To Dr. Nader's suggestion that economists should themselves work for labour reform and organisation the speaker replied that though individual economists may interest themselves in such activities the main responsibility for labour organisation lay on the workers who were themselves engaged in industries and on those other citizens who had chosen labour reform as the field of their public activity. With respect to Dr. Hasan's contention that what was immediately needed to improve the lot of the Indian worker was an extinction of the malspending of which the latter was guilty, and the contrary view of Prof. Rau and others that the immediate need was a rise in wages which would, in their opinion, be automatically followed by a rise in the standard of life, the speaker held that truth lay in a combination of both the views. Higher wages must ultimately come out of increased productivity, and it is desirable that the efficiency of labour should be enhanced both on account of

higher earning and better spending. He concluded by referring to the recent recognition by the International Labour Conference of the need of a special study of the problems of Asiatic labour by organising a coordinate body known as an Asiatic Labour Conference under the auspices of the governments concerned.

Dr. F. P. Antia remarked that Prof. Rao has already pointed out the weakness in Dr. Hasan's thesis that the wage of the Indian labourer has a margin of sufficient width to improve his standard of living if only he spent wisely and forewent his consumption of alcohol. Curiously enough Dr. Hasan omits to furnish us with any data supporting this. In fact the investigations made by the Bombay Labour Office not long ago, give a flat contradiction to this statement. 63 per cent of the family income, it was found, was spent on food supply. Now I should like to know, sir, what margin the remaining 34 per cent allows for an improvement of the standard of life when shelter and clothing have been provided for, even supposing he was converted from his wasteful drink habits. This is no more than a convenient camouflage. The worker may need tutoring in wise spending, but more imminently he needs to be freed from the condition where he has little to spend at all.

The big question is always there. Can industry afford to change that condition where he has little to spend? The same was the problem that baffled the classicists in England a century ago. And still it was found that with higher wages not only did the worker improve his living but industry found itself in an unprecedented state of prosperity. In this connection, may I commend to this assembly, sir, that a minimum standard of life for the worker be prescribed by the State by means of minimum wage legislation as in Australia. When this minimum is fixed, we can have a healthier form of competition without cutting into the vitals of the worker's life—the more so with world standards coming into force with the development of the international cult in labour standards, propounded by the International Labour Office.

The President said a mere demand for increased wages cannot raise wages since they depend on productivity of labour. A minimum wage legislation may not be of much avail in India. The application of science to industries, adoption of improved methods, increased skill of labourers, etc., are at the back of the progress of labour in other countries; and that is exactly what is wanted in India.

Further, since industrial labour has strong links with the rural areas, the improvement in the conditions of agricultural labour is of primary importance in securing better conditions for industrial labour.

## TOWARDS INDUSTRIAL PEACE

PAPER BY DR. B. V. NARAYANASWAMY.

Dr. B. V. Narayanaswami observed that adequate machinery for the conciliation and arbitration of collective labour disputes has been established in almost all the countries. Industry has thrived and with it have thrived what are called as the trade disputes. Our efforts are to be directed to minimise these. There is a tendency in modern times to settle these disputes amicably as far as possible. A great push is given to this tendency particularly since the Great War. As a result, 'Committees' and such other bodies are appointed in England, U. S. A., Germany and such other industrial countries to settle the disputes between the employers and the employees. But such settlement of the disputes is not the only task. There is also a growing tendency of consulting the employees through 'Works Committees,' 'District Councils,' and such other bodies.

In India, there exist the 'Workshop Committees' and allied bodies to settle the disputes between the employers and the employees. But there is no machinery whereby to consult the employees and gauge their views. The speaker pointed out that in modern Industry there are three elements, viz., (1) the employer, (2) the employee, and (3) the public opinion. By giving a full scope for the expression of the views of the first two, a favourable third element may be created. He therefore suggested that permanent Courts of Enquiry and Industrial Courts should be established by the Government. Both the parties—the employers and the employees, should be given full chance to put their case before this Court. This will further impartial justice and afford an opportunity for public opinion to exert its influence.

Secondly there should be 'Work Committees' appointed from amongst the workmen. These committees in conjunction with the employers should determine the conditions and limitations to be imposed upon the workmen and the general relations between the employers and the employees. There is a growing tendency of the modern age that everyone should determine himself the conditions and limitations to be imposed on him; and there is no reason why the labourer should not have the same right.

With such improvements as these the trade disputes will almost be reduced to nullity and industrial peace shall be secured leading to industrial prosperity.

## INDUSTRIAL FLUCTUATION

PAPER BY PROF. MURANJAN.

In presenting his Paper, Prof. Muranjan with the aid of tables contained in it, placed the following issues before the Conference. Is a stable price-level desirable as a remedy for the trade cycle? Taking into account the non-monetary causes of economic disturbances and the interrelations of prices, is a stable price-level practicable? He averred that stability of employment and business conditions and even economic progress may conflict with a stability of price-level, and more so the price-level of one particular class of economic goods. If changes in the rate of investment are a true cause of economic disequilibria, can mere manipulations of the bank-rate and even open market operations remedy them? May it not require a central direction and control of the investment activities of banks and issue-houses and even the undertaking by the State of extensive public works? Would investment by the State create during a trade-depression the necessary impetus and confidence in the business community or would it be merely futile? If changes in the price-level are due more to the changes in the velocities of circulation and less to the changes in the rate of credit-creation, how far can even these velocities be controlled by the monetary authorities? Are velocities largely or wholly a function of the changes in the volume of currency and credit or of antecedent causes like investment, business confidence, etc.? The concept and the actual working of velocities appeared to him to be shrouded in relative mystery.

Dr. F. P. Antia was in agreement with Prof. Muranjan's main point, though he wished he had developed it further. If the State collaborates with the businessman in prescribing channels of investment, we would hear less of industries growing obsolete and millions of capital absorbed therein being wasted or lying idle. Nor would we have this harrowing phenomenon of a glut of goods in the market on the one hand and rank misery for the want of them on the other—production being more evenly and deliberately spread in point of time as well as of commodities. What I should have liked Prof. Muranjan to do would be to define what form this collaboration is to take. We could not do better in this connection than look up to systems where such association has rendered the economic fabric almost fool-proof. In Russia we have this collaboration in its hundred per cent strength. Production has been planned out, farm by farm, plant by plant, mile by mile of railroad. There is little of friction or discrepancy or waste of effort—for every obstruction likely to arise and to impede progress has been provided for.



Recently when the world wheat market was so depressed, it was suggested that freight charges from the Punjab and the United Provinces to ports should be reduced. The consequences of bringing the distant areas into competition with growing areas nearer to the ports and probably driving these latter out of market were not thought of because the attention given to the problem was so narrowly one-sided. Grave distress again is likely to arise with the nationalisation of our agriculture because of the displacement of labour. For where are the industrial venues open to absorb the surplus from burdening the soil? A definitely laid-down plan of economic development can provide for every one of these contingencies and cause the minimum strain on the economic system. Then the wild flight of fancy in the entrepreneur's imagination cannot send production booming at one point, and his psychological dreariness cause total stoppage of production at another. To us in India, such planning is all the more essential when even such established industrial countries as England and America consider its advisability in the most conservative business circles.

Mr. Gadgil directed his remarks chiefly to the fourth section of the paper. He confined himself to making certain detailed criticisms regarding the statistical material presented in the paper. Among the points he raised were the following: (i) statistics of tea and groundnut had been omitted from the agricultural production index, (ii) the decline of prices had not been uniform over the last ten years and that the fall of prices could be said to have been violent only during the last two years, (iii) the comparison of the statistics of the years 1911—14 with 1925—28 as presented in the table leads to conclusions regarding trends which have been definitely disproved by the statistics of later years. (iv) The production plus the imports of pig iron have been taken as equivalent to the total consumption of pig iron in India whereas allowance should have been made for the exports, (v) A number of statistical series have been printed whose significance in the study of fluctuations is not made clear. (vi) The statement that there has been a considerable export of capital from India during the last ten years seems to have no basis in fact. The so-called flight of capital has been noticed only very recently and is a purely speculative movement.

# DISCUSSION ON THE FUTURE OF THE GOLD STANDARD WITH SPECIAL REFERENCE TO INDIA

PAPER BY C. N. VAKIL,

University Professor of Economics, Bombay.

## **Introduction.**

The Gold Standard has been one of the most important pillars of modern civilization. The chief reason why it has obtained this position is that it has been found to be a comparatively more stable standard in terms of which to measure other things. But when this most important characteristic has, as it were, given way on more than one occasion, and over certain long periods, one may begin to doubt the efficacy of retaining gold as the standard of value. In spite of these difficulties, it is possible that gold may assert itself, because the alternative standards hitherto proposed, however ingenious in themselves, require a highly complicated human machinery, difficult both to understand and to run. Besides its theoretical justification the greatest asset to the general acceptance of a standard of value is the universal confidence which it can inspire among the masses of people. Whereas gold is able to stand this test of mass approval, standards based on index numbers will not command that general acceptance.

## **Probable Changes.**

Though gold is thus likely to retain its position as the standard of value, the form or the mechanism of Gold Standard is likely to undergo important changes. The world has been passing through a Financial War, which seems to be about to approach its climax. With the problems of reparations and war debts; with the prevailing maldistribution of monetary gold; with tariff barriers and so on, the economic life of the West in particular and of the whole world in general has been rendered highly artificial. One need not be surprised if this Economic War leads to another World War, greater in magnitude than the one whose memories are still fresh. But in this land of non-violence, we shall hope for the best; let us assume that the Financial Crisis through which the world is passing will end in a peaceful solution.

The most important peaceful solution is some form of international co-operation for the rehabilitation of the Gold Standard. Among the more important measures, the following may be suggested:

- (1) The regulation of the international value of gold by suitable co-operation among the Central Banks of the world. This

will remove undue fluctuations in the international price-level.

- (2) The better distribution of monetary gold, by regulating its movement. This can be done, if international payments are made easy, through some common clearing house, like the Bank of International Settlements. With proper adjustment such an institution can also be a source of credit to the member nations. It will, in effect, be a financial adjunct to the League of Nations.
- (3) Economy in the use of gold by giving up the existing system which requires certain large gold reserves in the vaults of Central Banks. As recommended by the Macmillan Committee, this can be done by making the gold reserve independent of the Note Issue, to be used only for international payments. The amount of the Note Issue will then be fixed by law, suitable provisions for elasticity and emergency being made.

#### **Managed International Gold Standard.**

If co-operation on these or similar lines is established, we shall no longer have the automatic Gold Standard: we shall have instead a Managed International Gold Standard. Though it is difficult to be prophets in discussing economic tendencies, one may hazard the opinion that in the near future, there will be on the one hand efforts to force such international co-operation: and on the other, there will be a struggle among the more powerful nations of the world to obtain the best possible terms for themselves in the control or management of any such scheme. This unfortunate danger of international co-operation degenerating into the domination of the few powerful nations of the world over the rest will have to be minimised, if the scheme is to prove successful.

#### **Bimetallism.**

This particular way of looking at the world monetary problem discounts the possibility of what is known as bimetallism or the restoration of silver as a joint standard of value, along with gold, among the monetary systems of the world. Silver has been tried and found wanting. One may equally well say that gold has been tried and found wanting: but the question is of comparative stability and of comparatively easy acceptance by the masses. It is beyond doubt that silver is liable to more frequent and more violent fluctuations, and therefore

cannot be put side by side with gold as a standard of value. It is indeed true that the theoretical acceptance of silver on a certain internationally fixed ratio with gold, will help the richer countries who desire to have in practice a Gold Standard for themselves, leaving the less advanced countries to work on the Silver Standard, incidentally enabling the silver stocks of the world to be taken up at a profitable price. The problem of having a Managed International Gold Standard, and the problem of having a managed international fixed relation between gold and silver—both these present difficulties, but if a choice is presented, we should unhesitatingly prefer the former to the latter.

### **Empire Currency.**

Another alternative which has been proposed is to have an Empire Currency based on the Sterling as the standard of value in the management of which the countries of the Empire may have due voice. It may suit the vanity of Imperialists to think of schemes of this character, but how far such schemes will fit in with the requirements of the scattered and heterogeneous countries, which make up the Empire is difficult to forecast. Again, such schemes may, if successful, give that powerful weight to England in the international financial world which it may desire to possess for its own advantage. But if we look at the economic condition and the economic policy of at least the more important parts of the Empire, as well as the political tendencies which cannot be easily ignored in such matters, we shall at once come to the conclusion that the successful working out of a scheme of an Empire Currency, with the sterling as the standard of value, is not likely to succeed.

### **Sterling Standard in India.**

When we say that we cannot be unaware of the fact that, at least in one important case, the sterling has been made the standard of value beyond the boundaries of the United Kingdom. The forced arrangement by which the rupee is linked to sterling, and is thus reduced to the position of a shilling, will be known as a highly ingenious piece of financial strategy which England displayed in the Financial war through which the world has been passing since the Peace of Versailles. In the international discussions which are pending,—the experts will be forced to weigh the respective strength of the more important parties; the financial strength of England in this balance will not be that of the Empire; it will not be that of England alone; but it will be the combined financial strength of England and India. The international experts will have to consider, in adjusting world forces, the important repercussions which England is able to

bring about in the movement of world trade by putting India on the Sterling Standard by a stroke of the pen.

Those who can understand the importance of this move from the point of view of England, will at once see how important financial safeguards were to the British authorities at the Round Table Conference. It is easy to confuse the immediate issues with the remote, and if we read between the lines, it is not difficult to perceive that in the financial discussions relating to India in recent times, the immediate and temporary disadvantages of having a free rupee, have been exaggerated; and the permanent and remote advantages which England is having by keeping India on the Sterling Standard have been skillfully concealed. Apart from political issues, the use of India as a pawn in the financial game of the world by England, requires condemnation on scientific grounds. It is against all canons of theory and practice to relate the unit of value of one big country with the fluctuating unit of another.

#### **Conclusions.**

My conclusions are :

(1) That the future developments in monetary practice will be towards the formation of a Managed International Gold Standard by devising a suitable machinery for international co-operation in the matter.

(2) That the restoration of silver as a joint standard of value is neither practicable nor sound.

(3) That efforts may be made to bring about an Empire Currency System based on sterling as the standard of value, but that they are not likely to succeed.

(4) That the linking of the rupee to the sterling or the establishment of a Sterling Standard of value in India is part of such an Empire scheme; and that it gives an undoubted advantage to England, as we shall see in the near future in international discussions on the subject.

(5) That the time has arrived for India to assert her own right to be an equal partner in the management of the future international Gold Standard, and in order to do that, to break away from the Sterling Standard as soon as possible, and adopt a Free Rupee as a transitory measure.

Prof. Oturkar saw no hope of any international co-operation. He said that taking the present circumstances into consideration they had

three alternatives. The first was to wait for the time being and to adopt the gold bullion standard. The second was to set it aside and adopt an international standard or link Indian currency to an international standard. The third was to aim ultimately at a gold standard with the transition period of a limping standard as outlined in their scheme by Professors Wadia and Joshi. He objected to the first course as it lacked the vitality of an automatic standard and allowed Government to maintain with impunity an arbitrary rate of exchange. The second alternative too was out of question as the day was yet far distant when international financial operations would cease to be dominated by the Imperialists few. He, therefore, was of opinion that the third alternative was the more acceptable one. After answering certain criticisms against the scheme by Prof. Vakil, he suggested an improvement in the scheme, viz., that during the transition period, gold notes were not to be issued so as to ensure against the depreciation of the silver notes in terms of the gold notes.

Dr. Sinha agreed with Prof. Vakil in the need for some form of gold standard backed up by International co-operation. Of the three forms of gold standard, viz., gold currency standard, gold exchange standard and gold bullion standard, the first was out of the question in view of the need for economy in the use of gold. Currency reconstruction from the time of the Geneva Conference was along the line of the gold exchange standard but this system received a rude shock on account of England's suspension of the gold standard. Countries keeping their foreign assets in sterling had suffered on account of its depreciation. Hence the only form of gold standard possible was the gold bullion standard. If this was to function, the first requisite was the restoration of confidence and political stability, without which the creditor nations of the world would not be prepared to lend to countries suffering from shortage of capital and thus the present maldistribution of gold would not be remedied. Unless confidence was restored, the attempt to transform the Bank of International Settlements into a Super-Central Bank would fail.

As regards the immediate future, specially with reference to India, he discountenanced the idea of a free rupee which would make Indian exchange highly unstable. This would hit hard the already hardpressed cultivator. The bulk of our export bills, he said, was still drawn in sterling. Our position was therefore much the same as that of countries sending the greater part of their exports to England. Thus the Irish Free State sending 92 per cent of its total exports to England in 1929, had linked her currency to sterling. Our main advantage from the temporary linking of the rupee to sterling would be stability of exchange in the great bulk of our export trade. By linking the rupee

to sterling as a temporary expedient, we would not bind ourselves to sterling for ever. Our ultimate aim should be gold bullion standard, with a wide difference, say two per cent between the buying and selling rates for gold by our Central Bank. This would mean a slight departure from the principle of true gold standard but it was necessary, in order to have a stable exchange as well as a relatively stable price-level in the short period.

Prof. Kapoor tracing the causes of the present crisis to (1) scarcity of production of gold, and (2) maldistribution of existing stocks of gold, said that the former was of little importance. The latter was only a symptom of a more deep-rooted cause, viz., lack of confidence in the future as well as in other countries. The result was a scramble for gold on the part of every country especially France and America. But it was only a matter of time when these two countries would begin to see the folly of their ways. They followed a policy of economic nationalism irrespective of its repercussions on the world at large. If all countries had confidence in each other, gold reserves in every one of them could be reduced and the volume of fiduciary currency increased without endangering the gold standard in any one of them. Asserting that we were too timid for international co-operation, he asked why we should follow national policy in such matters when we blamed France and the U. S. A. for doing the same thing. Just as the introduction of a uniform Indian currency had done India a lot of good, the adoption of a uniform world currency would have advantageous results for the world at large. Consequently, therefore, India should throw her weight in the balance on the side of international co-operation in all such matters as currency, etc.

Principal Tannan agreed that international co-operation was absolutely necessary for working the Gold Standard, and thought that the Bank of International Settlements might issue some form of international paper currency and thus come to the rescue of the debtor nations. He did not think it necessary for him to go into the question whether or not it was right to link the rupee to sterling but pointed out the danger of maintaining the rupee at 1/6 sterling as this pseudo-stability of the Exchange might be put forth as an argument for stabilising the ratio at that level on return of the normal times.

Prof. Chablani pointed out:

(1) That in the absence of any attempt to regulate the international value of gold, even a rich country like England found the strain of sustaining the gold standard unbearable while the economic position created in India by linking the rupee with a price-level that was falling continuously was well-nigh intolerable.

(2) That neither the relative price levels in India and the United States in September 1931 nor the gold reserves of the Government of India as compared to the decreasing liabilities arising out of the note-issue and rupee-circulation justified the alarmist attitude that Government took in September 1931.

(3) That given stability of prices, the free rupee was as likely to fall to 5d. as the pound sterling to the value of the paper on which it was printed.

(4) That it is possible to stabilise the general level of prices in India and leave exchange to find its own level without any serious damage to the economic position of India.

(5) That the trade returns for October and November showed no stimulating effect on exports as the result of linking the rupee to the depreciating sterling.

(6) That the expansion of Indian currency as the result of stabilising the rupee in terms of sterling, which had been depreciating in terms of dollars "much more heavily" than its internal purchasing power justified, was likely to prove very embarrassing to Government when the gold rate of the sterling is again stabilised in the neighbourhood of the normal rate as determined by the purchasing power of the sterling and the dollar as it would then necessitate drastic deflation.

(7) That the proper policy to follow is to determine first roughly the approximate price-level which was proper to the circumstances of India and then aim at the stabilization of prices, leaving exchange free to find its own level.

(8) That it is not necessary to the success of such a policy to aim at exactness as it is quite sufficient to allow seasonal fluctuations of exchange to be regulated by movements of gold and allow exchange to absorb the shock of violent changes in the external price levels.

(9) That the experience of 1917—1925, particularly that of stability of prices during 1921 and 1922, showed that such a policy was feasible in India.

Principal Thomas did not understand what exactly had been meant very often by the terms 'India' and 'England' which had been used in the discussion. When speaking for instance, of "England" having profited from certain actions, probably, what was meant, really, was that a **certain number of financiers** had profited and not necessarily the country or people as a whole. He asserted that the real root of the trouble was an over-dose of economic nationalism all over the world and for that reason he welcomed the turn that the discussion



had taken that morning in emphasising the need for international co-operation if the currency and finance problems of the world were to be solved.

He felt that as a result of attending the Conference in recent years it had been impressed on his mind that the predominant factor in economic thinking in this country was India. This, and the prevailing political conditions in the country did, in his judgment, warp and narrow economic judgment in the country, and for that reason again, he was glad that for the first time in his experience of the Conference an international note has been struck. According to him the only true solution of the problem was to be found in internationalism and the sooner this was realised in every country as well as here, the better it would be not merely for India but for the whole world.

Mr. Subba Rao said that the discussion reminded him of Mr. Keynes' humorous dictum that people were born of two sorts—bullionists or inflationists. He was gratified to see that the trend of the discussion was not so bullionist as he had apprehended. The day of a Gold Currency was gone never to return, nor was it a matter for regret or apprehension if a certain amount of Gold left India on account of its high price. There was, surely, enough gold in India to allow one to watch the export with equanimity. The standard of the future was a managed Gold Standard, and he believed that it was to the interest of India to join any international arrangement to bring about such a result. He doubted the wisdom of linking rupee with sterling, and would have preferred a floating exchange. The essence of Currency management was regulation of Credit, and if that were done, exchange could be allowed to regulate itself.

The President said that, when Great Britain restored the Gold Standard in 1925, there was general faith in the Gold Standard. It is easy to be prophets after the event. The United States of America then held huge masses of gold. The late Benjamin Strong giving evidence before the Indian Currency Commission said that America held gold in trust for the world. It is not therefore fair to say that Great Britain should have left the exchange free since no reasonable person would have anticipated that great nations would work at cross purposes in respect of their attitude towards gold.

Since the stress on gold parity seems to have failed the world a new emphasis will have to be laid on stability of the price-level. But unless stability at a level higher than what is ruling now is resorted to, injustice will result throwing mechanism of production out of gear.

The President agreed with Mr. Rao that India required some inflation of currency. Since inflation is rather an ugly term we may substitute for it 'expansion.'

## PRESIDENT'S CLOSING REMARKS

Bringing the session to a close, the President expressed his indebtedness to the members for the way in which they helped him to discharge his duties. As regards the work that lay before us, the President said that our responsibilities were perhaps much greater than those of any other organisation. Politics may indeed engross attention but Economics must engross equal if not more attention. Our great task was to devote our mind to the rationalisation of the whole economic organisation of life in this country. The colossal nature of the task called for an infinite amount of goodwill, patience, hard work and sympathetic criticism.



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## ENGLAND'S DEBT TO INDIAN HANDICRAFTS AN ACCOUNT OF THE BEGINNINGS OF CALICO PRINTING IN ENGLAND<sup>1</sup>

BY

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### SUMMARY

England is to-day the centre of the world's cotton industry; Lancashire still continues to be the unrivalled centre of cotton manufacture. Yet this supremacy of England in cotton industry is hardly a century old. Before 1771, not a yard of pure cotton-cloth was made in England, as English spinners could not make cotton-yarn strong enough to serve as warp. India was then the home of cotton manufacture and the whole world got its cotton cloth from this country. Indeed even before Arkwright's invention, English handicraftsmen had learnt to print calico, if not to make it; and not only in England, but also in Holland and France, Indian methods of calico-printing were copied and adapted. This is the subject of the present paper.

<sup>1</sup>The principal sources utilized for this paper are the Board of Trade papers preserved in the Public Record Office, and contemporary pamphlets in the Goldsmith's Library and the Bodleian.

Towards the middle of the seventeenth century there was a rapid change in the fashions of men's and women's clothes in England. The good old broadcloth, 'the glory of England,' had already been long discarded; even the finer fabrics of the new drapery were fast going out of fashion. The upper classes—and indeed the people generally—wanted light and elegant clothing. English weavers could not meet this sudden demand, and naturally foreign stuffs came to be sought. First France and then India stepped in to supply the need. Just as French wine became a 'modish drink' in England at this time, French silks and light linens were bought and used in large quantities. Charles II, an ardent admirer of everything French, encouraged the new fashions and patronized this new trade. But the nationalist party appealed to the country, and parliament, already alarmed at French 'popery and wooden shoes,' completely prohibited in 1678 the importation of the French stuffs—a reply to Colbert's arret of 1667 forbidding the importation of English cloth into France.

This gave India the opportunity. The East India Company about this time rapidly increased its 'investments,' and England was flooded with the silks and calicoes, the muslins and chintzes of India. These commodities were of better quality than the French stuffs they replaced, for India in those days specialized in the best kinds of cotton cloth. Besides, these Indian goods were incredibly cheap because of the low wages obtaining in that country. Elegance was thus combined with cheapness; and little more is needed to make a commodity popular. The result was eloquently described in contemporary pamphlet literature. 'On a sudden,' says a writer,<sup>2</sup> 'we saw all our women, rich and poor, cloath'd in Calico, printed and painted, the gayer and the more tawdry the better.' At first, only the poorer people used them, 'those who could not go to the price of linen and yet were willing to imitate the rich.' But very soon these gaudy Eastern stuffs

<sup>2</sup> **A Brief Deduction of the Original Progress and Immense Increase of Woollen Manufacture (1727), p. 50.**

came to be used by the higher classes as well, 'from the greatest gallants to the meanest cookmaids,'<sup>3</sup> so that according to a satirical writer it became difficult for the better fold 'to know their wives from their chambermaids.' Another writer could not understand how these 'ordinary, mean and low-priced' stuffs could be used by 'the gayest ladies on the greatest occasions.' Queen Mary herself, the leader of fashion in her day, is said to have used them publicly. According to Defoe<sup>4</sup> 'Her Majesty had a fine apartment (at Hampton Court) with a set of lodgings. . . . most exquisitely furnished, particularly a fine chintz bed.'

At first, the Indian goods had been used only for beds, screens, hangings, and other furniture, but later they were 'promoted' to the bodies of men and women. As Defoe satirically puts it, 'the chintz was advanced from lying upon their floors to their backs, from their footcloth to the petticoat.'<sup>5</sup> Thus, men came to use shirts, neckcloths, cuffs, and pocket-handkerchiefs made of Indian calico, and this was even called popularly by its Tamil name, *Rumal*. Women used Indian stuffs for headdresses, hoods, sleeves, aprons, gowns, and petticoats. As for children's frocks, they came to be made of printed and striped Indian calicoes instead of the green says of old. Most people used Indian socks and stockings, and their dressing-gowns were made of calico. The invasion of these foreign stuffs can be traced even in the paintings and pottery of the period.<sup>6</sup>

The enormous extent and rapidity of the change incited many patriotic writers to attack the new-fangled fashions. The women-fold were assailed in the press and in pamphlets for their 'passion for their fashions.' 'Their great-grandmothers who for ornament and dress painted their own bodies would be astonished at

<sup>3</sup> Cary, *Concerning East India Trade* (1697).

<sup>4</sup> Quoted in Lenygon, *Decoration in England, 1660—1770*, p. 215.

<sup>5</sup> *Weekly Review*, 31st January, 1708.

<sup>6</sup> Birdwood, *The Arts of India as Illustrated by the Prince of Wales's Collection*, p. 80.

the Calico-picts, their degenerate children, and fly from their own offspring.<sup>7</sup> 'Lite commodities' another writer said, 'are always encouraged by lite women; similis simili gaudet.'<sup>8</sup> Women dressed in calico and muslin were 'more like the Merry Andrews of Bartholomew Fair than like the ladies and wives of a trading people.'<sup>9</sup> The witty 'Prince Butler' rhymed thus 'o'er a pot of ale':

Our Ladyes all were set a gadding  
After these toys they ran a madding,  
And nothing then would please their fancies  
Nor dolls, nor Joans nor wanton Nancies  
Unless it was of Indian making.<sup>10</sup>

The calicoes and other stuffs were 'as light as women and as slight as cobwebs, printed tandrums and the gewgaws of East Indies,' which came upon the country as 'a plague.'

The woollen and silk manufacturers of England were alarmed at the growing unpopularity of their own commodities, and moved by their appeal parliament repeatedly discouraged and prohibited the importation of calicoes and chintzes into England.<sup>11</sup> But this legislation proved very ineffective. People could not be made to return to their old fashions. There was a real demand for lighter and more elegant clothing, and this had to be met somehow. If they could not come from abroad they must be made at home. And this did in fact happen. 'No sooner were the East India chintzes and painted calicoes prohibited from abroad but some of Britain's unnatural children. . . . set their arts to mimick the more ingenious Indians and to legitimate grievances by making it a

<sup>7</sup> Steele (?), *The Spinster in Defence of Woollen Manufactures* (1719), p. 16.

<sup>8</sup> *The Interest of England Considered* (1707).

<sup>9</sup> *A Brief State of the Question* (1720), p. 11.

<sup>10</sup> *Prince Butler's Tale*, 1699.

<sup>11</sup> 11 and 12 Will. and Mary, c. 10. For an account of this struggle see the present writer's *Mercantilism and the East India Trade* and S. A. Khan, *East India Trade in the Seventeenth Century*, Ch. IV.

manufacture.<sup>12</sup> Thus, there arose a new industry of calico-printing in England, and although this was not the progenitor of the now powerful calico-printing business of Lancashire, its history is important in many ways to the student of industrial origin. The subject is, however, little known.

It is now really difficult for us to realize that even so late as 1750 very little cotton cloth was made in England. Indeed, we read of 'cottons' even in the sixteenth century, but those were a species of woollen cloth. In the seventeenth century, however, we have definite records mentioning the manufacture of cloth from cotton-wool imported from the Levant; but this again was not genuine cotton cloth; it was the hybrid 'fustians,' made of linen warp and cotton weft.<sup>13</sup> English artisans had not yet succeeded in making cotton-yarn strong enough to serve for warp. Successive attempts were made towards the latter part of the century to make pure calico in England, and some weavers succeeded in their attempt, but no real calico industry existed or could exist in England before the inventions of Hargreaves and Arkwright. However, if they could not make genuine calicoes, the English artisans could at least print cotton cloth imported from India, and this they did long before the English cotton industry was started. Calico-printing, therefore, is curiously enough an elder sister of the cotton industry in that country, and it flourished in the south of England long before Lancashire took to calico-making and printing.

The author of the pamphlet, *The Just Complaints of the Poor Weavers Truly Represented*, in the passage quoted above, assumes that calico-printing was introduced into England only after the prohibition of Indian goods, which took place in 1700. But we know from other sources that there existed calico-printing mills in England before that date. According to the 'judicious'

<sup>12</sup> *The Just Complaints of the Poor Weavers Truly Represented* (1719), attributed to Defoe.

<sup>13</sup> See Daniels, *Cotton Industry*, Ch. I.



Anderson printing in England began in 1676; and this is confirmed by a patent given to one William Sherwin in that year 'for the invention of a new and speedy way for printing broadcloth, which being the old true way of East India printing and staining such kinds of goods.' The same person<sup>14</sup> appeared before the House of Lords in 1696 and claimed that he printed calicoes and even woollen cloth, but he admitted that they would not bear washing. Evidently he must have used pigments as the French printers had done, and madder and resist process of India was not yet known in England.

In 1690 a Frenchman, Rene Grillet, took a patent for painting and printing calicoes, and a factory for this purpose was opened by him in the Old Deer Park at Richmond, hardly fifty yards from the Thames. This was the first calico-printing factory in England. Baines<sup>15</sup> surmises (and other writers follow him) that the owner of this establishment was a Huguenot refugee, but from the subsequent mention in various pamphlets and Board of Trade papers that calico-printing was done by Roman Catholic Frenchmen, it is more likely that the Frenchman in question was a Catholic, and that his trade (rather than his religion) compelled him to leave France soon after the arret of 1686 prohibiting calico-printing in France.<sup>16</sup> We know that he was for some time in Holland before he came over to England, and it is likely that he perfected his art there under the care of the skilled Dutch master-printers. A great number of men and women was employed by him in this factory, and they were 'a saucy and independent lot' according to local accounts,<sup>17</sup> and were mostly French-

<sup>14</sup> **House of Lords' Papers**, New Series, II, Section 1050.

<sup>15</sup> **History of Cotton Manufacture in England** (1845), p. 259. Also Cunningham, **Growth of English Industry and Commerce** (Modern Times), p. 517.

<sup>16</sup> Public Record Office, C. O. 389, p. 309 (Commissioner's Report). See also the pamphlet, **The Weavers' True Case** (1719), p. 23.

<sup>17</sup> Crisp, **Richmond and Its Inhabitants** (1866), p. 115.

men and by religion Catholics. They were apparently hated on both accounts, and perhaps it was this that made parliament luke-warm in its defence of this industry.

Soon another factory rose at Bromley Hall in Essex. A grant was made to Francis Pousset in 1694 for a new way of preparing crape in flowers, ramages, etc. The factory of Bromley Hall stood as number 1 in the Excise Books when the first duty was imposed on calico-printing (1712), and certainly it must have been the most prominent printing concern of the time. Other factories were soon founded at Lewisham, Mitcham, Wandsworth, and other places south of London, mainly in Surrey.

These factories were engaged in working up the imported calicoes for the English market by dyeing, printing, painting, staining, and other processes. The East India Company<sup>18</sup> imported both plain calicoes and printed ones (called chintzes), but owing to the perceptible difference in price between the two varieties they subsequently came to increase their outlay on plain calicoes. Besides, they thought they could pacify the popular outcry against their trade by supplying work to people in England as a compensation for the bullion they exported. However, in printing these calicoes, English artisans had to depend upon Indian methods. In India from time immemorial a remarkably perfect method of printing was known and employed. This method was first explained to Europe in 1742 by a learned French missionary, Pere Courdoux<sup>19</sup> (who, by the way, deserves to be better known as the first to suggest the hypothesis of an original Indo-European race). The Dutch were the first to introduce these Indian processes into Europe. From them the French and the English obtained the secret. The first great French calico-printers,<sup>20</sup> Daniel Vasserot and his nephew Antoine Fazy, learned the

<sup>18</sup> Letter Books, Vol. VIII, fo. 570. Also Vol. X, *passim*.

<sup>19</sup> *Recueil des Lettres Edifiantes et Curieuses*, Vol. XXVI.

<sup>20</sup> *Nos Anciens et leurs Oeuvres* (1906), pp. 103 18.

art from Holland; when this industry was prohibited in France they practised it in Geneva outside French territory.

In the early English printing factories wooden blocks were used for printing, blocks of sycamore about five to ten inches square. The method of printing followed was an adaptation of the Indian madder and resist process, which is first mentioned in the grant of 1694. Later, copper plates came to be used in place of wood. These early methods are exhibited in the Victoria and Albert Museum at South Kensington. The special process called Turkish red, introduced into France by an Armenian, was made of the Indian Chaya root and Kasha leaves. It baffled chemists for a long time until it was cleared up, quite recently (in 1902), by a calico-printer at Leyden, Felix Dreissen, who got the secret from a native dyer in Madura (South India).<sup>21</sup>

The calicoes printed in England in this way were technically known as *Londrindiana*. In France they were popularly called *Indienne*. They were sold on the pretence that they were made in India. Such an assurance was the only means of satisfying customers that the quality was good.

From extant records<sup>22</sup> we may form an idea of the employees in a calico-printing factory in those days. The principal workmen were drawers, cutters, printers, job-printers, grounders, tearers, and fieldmen. The drawers invented patterns, of course, copied them from Indian chintzes, for the designs on the English-printed calicoes were almost the same as those that came from Masulipatam. The tree of life, the peacocks, the snakes, the bamboos, all were taken over bodily from Indian chintzes. The cutters engraved those designs on wood for the use of the printers. Printers made the first impressions of any colour on calicoes. Job-printers renewed and reprinted old calicoes and linen; their work is said to have given 'great encouragement to servants to rob their masters or mistresses, for by getting it

<sup>21</sup> Baker, *Calico Printing and Painting in the East Indies*, p. 43.

<sup>22</sup> C. O. 388, Vol. XXI, fo. 223.

printed, alters it so much as cannot be known.' Grounders mostly, women, put finishing colours. The tearers were boys and girls who attended the printers when at work. Fieldmen whiten-ed the calicoes and were not different from ordinary unskilled day-labourers. Only the first three classes had any kind of training; and even they were not trained exclusively in any special process. All these employees worked only eight or ten months in the year.

From the controversy on the use of Indian textiles, in 1696-97, we get a glimpse of the condition of this industry at that time. There was then pending before parliament a bill for prohibiting entirely the importation of printed calicoes into Great Britain.<sup>23</sup> The calico-printers were naturally alarmed, and many of them petitioned parliament, praying for the deletion of the clause that went against their interests.<sup>24</sup> They were apparently a numerous and influential set of people. They employed three counsels to plead their case before the house. Jekyll, one of them, claimed that 'calico-printing was as much a manufacture as any woollen' and deserved encouragement. Pooley used Davenant's arguments that the cheapness of calico made it suitable for home consumption and profitable to the kingdom. The calico-printers seem to have spent a good deal to further their cause.<sup>25</sup> One of them confessed before the house subsequently that he spent £200 in fees to solicitors and others. Some of the bold ones among them appeared before the house and stoutly opposed the bill. William Sherwin said that the trade employed four hundred people.<sup>26</sup>

The bill of 1696 was lost on account of the opposition of the upper house, and next year a similar bill also miscarried owing perhaps to the machinations of the East India Company, which was then dominated by that inveterate intriguer, Sir Josiah Child.

<sup>23</sup> Commons' Journals, Vol. XI, *passim*.

<sup>24</sup> House of Lords' Papers, New Series, Vol. II, Section 1050.

<sup>25</sup> Commons' Journals, XI, 683.

<sup>26</sup> House of Lords' Papers, New Series, II. 241.

After the death of Child in 1699, a similar prohibition bill was successfully carried through parliament. This was the first legislative enactment in England against Indian imports. But, fortunately for the calico-printers, the clause that included English-printed calicoes in the operation of the bill was dropped. The printers rejoiced, because instead of ruining them, as was formerly expected, the new legislation provided for 'their plentiful increase.'

After 1700 the printing industry flourished more than ever.<sup>27</sup> The woollen and silk manufacturers, for whose sake the Act of 1700 was passed, soon realized that their victory was of a very doubtful value. According to John Haynes (1706), 'greater quantities of calicoes had been printed and worn in England annually since the importing of it was prohibited than ever was brought from India.'<sup>28</sup> The rapid growth of this industry is evident also from the greatly increased imports of plain calicoes from India, which may be studied in the dispatches of the East India Company's Directors.<sup>29</sup> The Act of 1700 did not put a tariff on plain calicoes imported, but in 1703 parliament, in order to please woollen manufacturers, imposed an *ad valorem* duty of 15 per cent on them. However, a full drawback was allowed on re-exportation. We do not know exactly how it affected the new industry. A contemporary writer, Chalmers, pointed out that the duty must have been rather light considering the fact that the prime cost of calicoes was only a fraction of the value which they would fetch when printed.<sup>30</sup> But we know that in 1711 the printers complained that the duty had reduced their industry to a third of its previous strength.<sup>31</sup>

<sup>27</sup> Espinasse, *Lancashire Worthies*, p. 297.

<sup>28</sup> *View of the Present State of the Clothing Trade* (1706), p. 19.

<sup>29</sup> Letter Books, Vols. XI, XII, and XIII.

<sup>30</sup> C. O., 390.

<sup>31</sup> Bromley Papers (Bodleian), Vol. II, fos. 113, 134.

The woollen and silk manufacturers looked upon their younger rival with a jealous eye, and were determined to suppress it at any cost. Wool always claimed to be the stable manufacture of England. And, as Adam Smith points out, the woollen workers were 'more successful than any other class of workmen in persuading the legislature that the prosperity of the nation depends upon the extension of their particular business.' As yet the merchants and manufacturers had not a great many representatives in parliament; the squirearchy still controlled the destinies of the nation. But the simple country gentlemen who sat in parliament were, according to the same writer, 'often prevailed upon by the clamours and sophistry' of the industrial classes. Besides, rightly or wrongly, they thought that their interests were eventually the same. Whatever affected the woollen industry, they thought, would ultimately affect the rent of their lands. It was thus that parliament in those days took the side of wool against minor and younger industries.

The weavers clamoured against calico-printing, and parliament imposed an excise duty of threepence a square yard on calicoes.<sup>32</sup> Calicoes printed in one colour only were however exempted from the tax. Two years later the excise duty was raised to sixpence a square yard. The calico-printers protested, and pointed out that the additional burdens (which in all amounted, according to them, to 82 per cent, *ad valorem*<sup>33</sup>) would not only ruin their trade but encourage the smuggling of Dutch printed calicoes, which were cheaper by one-half owing to the favourable treatment accorded to the industry in Holland. But parliament did not relent. Colbertism was then its confirmed creed, and so it remained for another century.

In spite of this stepmotherly policy of government, the infant industry grew up in vigour and importance. In 1711 the Directors

<sup>32</sup> 10 Anne, c. 19.

<sup>33</sup> Bromley Papers, Vol. IV, fo. 29.

of the East India Company wrote to India: 'Our people here do it (i.e., printing) at one-half the price and better colours and patterns.' There arose an increasing demand for these goods in the colonies and elsewhere, and the industry expanded to meet the demand. In 1719<sup>33</sup> there were a good many factories in the counties of London, Surrey, Kent, and Essex. The chief proprietors were Mauvillon, Watson, Haultain, Madam Bull, Quard, and Gouyne. Mauvillon was a prominent calico-printer even in 1697, when he appeared before the House of Commons to give evidence on the Calico Bill. In 1719 he had one factory at Mitcham and another at Wandsworth. Mr. Watson had three, situated respectively at 'Morrisses Cassau,' Bunhill Fields, and Wandsworth. Most of the establishments were either on the banks of the Thames or on those of its tributary, the Wandle.

Like other industries introduced by foreigners in that period, calico-printing was organised on a capitalist basis. It had no guild traditions to keep up; nor was it possible for it to become a domestic industry like the woollen. The various processes had to be carried on in combination, and artisans had to work at some common place in order to cooperate effectively. Besides, the employers were calculating capitalists seeking a profitable investment for their money. As Dr. Cunningham<sup>35</sup> points out, capital is bound to be an important factor in the transferring of a trade to a new area. All these circumstances combined to make calico-printing a factory industry of the modern type, and perhaps it was in this industry that the factory system first became normal in England.

The factories were mostly well-equipped and were located within convenient reach of water. In 1720 the printers stated before the commissioners of trade and plantations 'that they had fitted up costly equipment by erecting workhouses, preparing

<sup>34</sup> C. O., 389, Vol. XXVII, fo. 223.

<sup>35</sup> *Op. cit.*, p. 518.

ground, conveying water, and providing costly utensils,' and that the whole plant would go to rack and ruin if calicoes were prohibited. It is also interesting to note that large numbers were employed in each factory. Mauvillon had 152 workmen in a single factory, of whom 60 were fieldmen, 40 tearers, 12 grounders, 28 printers, and 12 drawers and cutters. Watson's factories were smaller; yet in one of them he employed 77 workmen of various kinds. The labourers were not all men; women and children also were employed in these factories.

Alarmed at the undue popularity of calicoes the woollen and silk manufacturers again made an uproar, this time not against a foreign manufacture but against a native sister industry. Their clamour was again successful in moving parliament, and the result was the final prohibition in 1720 of the wearing of cotton cloth in England. But this was not accomplished without a protracted struggle. First they bullied calico-wearers by tearing their clothes to pieces. They also tried to destroy calico-presses. Many riots broke out in London and elsewhere in carrying out this policy.<sup>36</sup> Later they took to milder methods. An acrimonious controversy was also carried on by means of pamphlets and newspaper articles; and the authorities were pestered with petitions and memorials. Newspapers were started by both parties solely to win public opinion to their side. The weavers' petitions caused an elaborate inquiry into the matter, conducted by that remarkable body of trade experts, the lords commissioners of trade and plantations.<sup>37</sup> From November 1719 the House of Commons too was flooded with petitions from the weavers.<sup>38</sup> They came from all over the country and numbered ninety in all. The house was much influenced by

<sup>36</sup> See Newspapers, *Old Weekly Journal*, *British Gazetteer*, and *Saturday Post*, for June to August, 1717. Also pamphlets and *Boyer's Political State of Great Britain*, XVII, 627.

<sup>37</sup> C. O., 389, Vol. IX.

<sup>38</sup> *Commons' Journals*, Vol. XIX, *passim*.



these demonstrations, and soon passed a bill<sup>39</sup> penalizing the use, whether for clothing or for furniture, of printed calicoes. About this time France also made her laws about *toiles peintes* very stringent, and took measures to extirpate the industry from the land. Other countries in Europe, excepting Holland, followed suit.

In spite of this stringent legislation calico did not get out of fashion. In France the wives of ministers and ladies of the court were the first to break the law. They were passionately fond of wearing printed calicoes. 'Fruit defendu' writes M. Clouzot,<sup>40</sup> 'les toiles deviennent la passion de toutes les filles d'Ève françaises.' Nor did the prohibition succeed much better in England. 'All the kings and parliaments that have been or shall be cannot govern our fancies,' wrote Defoe<sup>41</sup> in 1728, speaking of the injurious effects of women's calico-mania. Choice chintzes were smuggled into the country straight from India or by way of Holland. The English calico-printing industry staggered under the blow; though calico-printing did not altogether cease, because a certain amount was wanted for exportation. But this was not enough to keep the factories going, and they took to printing fustians and linens with the same designs as they used for calico. Fustian printing was highly developed and soon became a prominent industry. This did not please the weavers of Norwich and Spitalfields. They found that printed fustians harmed their industry as much as calicoes did. The Act of 1720 did not prohibit the use of printed fustians and linens, but these woollen weavers wanted the law to be so construed as to include these as well. They even proceeded to prosecute fustian weavers and printers on that assumption. But parliament came to the latter's rescue

<sup>39</sup> 7, George III, c. 5.

<sup>40</sup> *Les Toiles Peintes de l'Inde* (Printed in Baker).

<sup>41</sup> *A Plan of English Commerce*, p. 252.

by passing in 1736 an Act<sup>42</sup> (often called the Manchester Act owing to the leading part Manchester for the first time took in the controversy) which definitely laid down that printed goods made of linen-yarn and cotton-wool were excluded from the operation of the Act of 1720.

The ban on pure cotton goods remained till 1774. The calico-printing industry, however, did not die out in the meantime. As the weavers of London pointed out in their petition opposing the Manchester Act, fustians could only with great difficulty be distinguished from Indian calicoes. Printing work went on in the Surrey Mills, and the workers there became highly skilled in their art. In 1744 the Directors of the East India Company wrote to India, 'Printing here has come to so great perfection that unless you can keep to these instructions you must lessen the quantity.' About the same time English printed goods gained great reputation on the Continent. Jean Rhymer,<sup>43</sup> a Bayle calico-printer wrote that the English successfully attempted the imitation of the best Indian work in prints, and that they arrived at a degree of perfection which no one would have thought possible.

Most of the calico-printing works<sup>44</sup> were situated in Surrey. The banks of the Wandle were studded with these mills from Croydon down to Wandsworth. The running water of that river was utilized in driving the mills. We do not know exactly how many factories in all there were, but we know that in 1805 there were twelve calico-printing works, employing as many as 3,000 hands. There were besides these many linen-printing works. The chief families engaged in the industry were the Ormerods, the Selbies, the Marlars, and the Burroughses. The parish registers of Surrey churches contain numerous notices of members of these families entered specifically as calico-printers. Espe-

<sup>42</sup> 9 George II, c. 4.

<sup>43</sup> Baker, p. 48.

<sup>44</sup> See **Victoria County History, Surrey**, II, 369 ff.

cially the Mitcham registers have a great number of such entries for the first half of the eighteenth century. Considering the number of the calico-printing and other factories in Surrey, and the large numbers employed in them, we are perhaps right in inferring that that region was in those days one of the principal industrial areas of England.

Lancashire had not yet taken to calico-printing. Manchester was not yet 'the city of cotton twists and twills' which it subsequently became. In 1764, Messrs. Clayton set up a small factory at Preston for calico-printing, but it was the first Sir Robert Peel, the father of the Prime Minister, who made it a prominent industry of the country. Various technical improvements were soon made in printing methods. The introduction of the power-loom revolutionized cotton industries as a whole. Calico became cheap and plentiful, and this made for a marvellous expansion of the printing industry. Surrey, already losing ground, soon found itself completely crippled. Yet some of the mills dragged on a lingering existence down to the middle of the last century. By 1845, the Lancashire cotton industry had made such progress as to embolden Sydney Smith write of it, that 'The great object for which the Anglo-Saxon race appears to have been created is the making of calico !'<sup>45</sup>

<sup>45</sup> *Works*, III, 476.

# SOME ASPECTS OF RURAL CREDIT AND THE PROBLEM OF BANKING DEVELOPMENT IN RURAL INDIA

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To the student of Indian Economic problems, the reports of the Provincial Banking Committees are of special value, being a veritable mine of useful information. The layman is apt to imagine that they have been superseded by the report of the Central Banking Enquiry Committee, but the careful student will prefer to tap at the source and to rely on first-hand investigations made largely under the direction of well-known Indian economists in different provinces. A summary at its best is of doubtful value compared to the original; but when the task of summarising is entrusted to men who themselves did not conduct the investigations and who probably could not even read the ponderous volumes of evidence, a summary is apt to be a very misleading picture of the original. The recommendations of some of the provincial committees are parts of an organic whole; to accept one part and reject another of a whole scheme is like picking out the foundations of one building for the superstructure of another totally different building. There is no doubt that the provincial reports are of uneven quality; some have based their conclusions on real, impartial investigations, some on one-sided official evidence, specially from the Co-operative Department and some on presumptions based upon their own personal prejudices and prepossessions. The comparative shortness of time allowed to the provincial committees seems to have seriously embarrassed most of them with the result that while one part of their report is

thorough and detailed, the other part of the same report is superficial and almost worthless. None the less, the provincial reports are worth a detailed study. Never before have economic conditions in different provinces been surveyed *simultaneously* on the scale adopted by these committees. Put together, they give for the first time a comprehensive view of India as a whole. The rural sections of these reports are specially valuable, if not for their detailed information, at least for the rude shock they give to some of the most widely accepted notions regarding rural credit conditions and the new light they throw on the nature of the problem of banking development in rural India.

### The Thesis of Professor Thomas.

One of the commonly accepted beliefs was repeated by Professor Thomas at the last year's Economic Conference at Lahore. He complained of "The high price that Indian traders, manufacturers and cultivators have to pay for the use of capital," stated that "the bank-rate may be 5 per cent or even as low as 3 per cent, but the average businessman *has to pay* about 9 to 12 per cent, and the average farmer and handicraftsman anything between 12 and 24 per cent for their short-term credits, and town labourers usually raise loans on such exorbitant rates as  $37\frac{1}{2}$  per cent and 75 per cent per annum," and came to the conclusion that "*wide disparity obtains between the bank-rate and the market-rates in this country*" and that "*the smoothening down of that disparity is the central problem of banking in India.*" I ventured to express my dissent from this view, and said that while the bank-rate was unduly high and could be reduced considerably, the market-rate was in some places even lower than the bank-rate, and that the so-called market-rates charged to the average farmer were gross-rates and not net-rates of interest and that no enduring banking system could be based upon unsatisfactory security and still more unsatisfactory means of recovery. My observations were dismissed with the remark

that I was wrong in assuming that there was no great disparity between the bank-rate and the market-rate of interest and that I might be talking about my "own province." As this misconception goes to the very root of the matter, I propose to deal with it first.

### The Bank-Rate and the Bazar Rates.

The first proof I would adduce in support of my view is the statement No. XIX in the report of the Controller of Currency for the year 1930-31 and statement No. XVIII of the Controller's annual reports for the years 1929-30 and 1928-29. These statements show that—

(a) In December 1930, and January 1931, the bill rate in the city of Bombay was  $\frac{2}{3}$  per cent higher than the bank-rate and the Imperial Bank's *hundi*-rate, that in February 1931 it was actually *lower* than the bank-rate and the Imperial Bank's *hundi*-rate by  $\frac{2}{3}$  per cent and that in March 1931, it exceeded the bank-rate and the Imperial Bank's *hundi*-rate by only  $\frac{7}{16}$  per cent.

(b) In 1929-30, the Bombay Bazar bill rate was higher than the Bank-rate<sup>1</sup> by only  $\frac{3}{4}$  per cent in June, by  $\frac{5}{6}$  per cent in July,  $\frac{5}{16}$  per cent in August and 1 per cent in September, and that in the busy season—October to March—the widest margin between the two rates was only  $2\frac{1}{16}$  per cent.

(c) In 1928-29 the limits of divergence between the two were  $1\frac{3}{4}$  per cent in August and September 1928, and  $2\frac{5}{8}$  per cent in February 1929.

In order to understand the full implications of these facts, it is necessary to bear in mind the special meaning of the terms used in the Controller's report. "The bank-rate," we are told in para 3 of this report, "is the rate at which the Imperial Bank will

<sup>1</sup> The Bank-rate and the Imperial Bank's *hundi*-rate were the same in 1929-30 and in 1928-29, except in February 1929, when the latter was  $\frac{1}{4}$  per cent higher than the former.

ordinarily advance money against Government securities, while the Imperial Bank *hundi*-rate is the rate at which the Imperial Bank will discount or rediscount first class three months' bills. The bazar-rates are those at which the bills of *small* traders are discounted by shroffs, the rates for bills of *large* traders and shroffs are not given separately because they follow *very closely the Imperial Bank hundi-rate*."

### The Bank-Rate and Market-Rates in Other Centres.

The data collected by some of the Provincial Banking Committees more than confirm this statement. For instance, in the city of Delhi the market-rates for discounting *Miyadi-Hundis* of first and second class parties between October 1927 and January 1930 were as follow:—

Year and Month	Delhi rate	Imperial Bank's Bank-rate.
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#### 1927

October	... .. 7½ per cent	5 per cent
November	... .. 7½ per cent	5 per cent
December	... .. 7½ per cent	5 per cent

#### 1928

January	... .. 6¾ per cent	7 per cent
February	... .. 6 per cent	7 per cent
March	... .. 6 per cent	7 per cent
April	... .. 7½ per cent	7 per cent
May	... .. 5¼ per cent	7 per cent
June	... .. 5¼ per cent	7 per cent
July	... .. 5¼ per cent	6 per cent
August and September	... .. 5¼ per cent	5 per cent
October	... .. 7½ per cent	5 per cent
November	... .. 7½ per cent	5 per cent
December	... .. 7½ per cent	6 per cent

Year and Month	Delhi rate	Imperial Bank's Bank-rate.
1929		
January	6 per cent	7 per cent
February	6 per cent	7 per cent
March	6 $\frac{3}{4}$ per cent	8 per cent
April	6 $\frac{3}{4}$ per cent	8 per cent
May	4 $\frac{1}{2}$ per cent	7 per cent
June	4 $\frac{1}{2}$ per cent	6 per cent
July	4 $\frac{1}{2}$ per cent	5 per cent
August	4 $\frac{1}{2}$ per cent	5 per cent
September and October	6 $\frac{3}{4}$ per cent	5 per cent
November and December	7 $\frac{1}{2}$ per cent	7 per cent
1930		
January	5 $\frac{1}{4}$ per cent	7 per cent

In the city of Peshawar, the market-rate on promotes for 60 days was lower than the bank-rate by 3 per cent in April 1929 and by 1 per cent in May 1929 while in June 1929, both were 6 per cent.<sup>2</sup> In the city of Ajmere, the evidence showed that "the lending rate among the *sahukars* is 4 $\frac{1}{2}$  annas per cent (i.e., 3 per cent) for about seven months and 6 annas per cent (i.e., 4 $\frac{1}{2}$  per cent) from November to April"; while the *hundi*-rate varies generally between 4 annas per cent (i.e., 3 per cent) in the months of June, July, August and September, and about 6 annas per cent (i.e., 4 $\frac{1}{2}$  per cent) in the busy season.<sup>3</sup> The Punjab Committee reports that "for first class *Hundis* the Bazar-rate is generally  $\frac{1}{2}$  to 1 per cent below the bank-rate," and that "in Amritsar the highest point touched by the bazar-rate in the last five years is 7 per cent as against 8 per cent in the case of the bank-rate."<sup>4</sup>

<sup>2</sup> **Vide** p. 209 of the Evidence taken at Peshawar.

<sup>3</sup> **Vide** para 2270 of the Ajmere Evidence.

<sup>4</sup> **Vide** page 125 of the Report.



The U. P. Committee's finding is that "*Muddati Hundis* are current during the winter season, when the money market is tight, at rates varying between  $7\frac{1}{2}$  and 9 per cent and during the slack season at  $4\frac{1}{2}$  to  $7\frac{1}{2}$  per cent according to the credit of the parties. The bazar-rate is sometimes *lower* than the bank-rate."<sup>5</sup> The Bombay Committee observe that the "rate of inter-shroff business in Bombay is generally  $4\frac{1}{2}$  per cent for the slack season and 6 per cent for the busy season, whereas the prevailing rate in the Ahmadabad bazar for such transactions is not more than  $4\frac{1}{2}$  per cent at any time of the year."<sup>6</sup> The Central Provinces Committee state that "the shroff-rate for lending money to other money-lenders and bankers and for making deposits of surplus cash is about 5 per cent per annum, and for financing local traders  $7\frac{1}{2}$  per cent per annum."

It is plain that, *given the same or nearly the same security*, the disparity between the bank-rate and the market-rate is more in favour of the latter than the former. Taking into account the fact that the bank-rate in India is the rate for demand loans against Government securities, one would expect the official rate of the Imperial Bank to be the lowest not only among the bank-rates of the world's Central Banks, but also among the prevailing market-rates of interest in India at *all* seasons of the year. *The surprising fact is, not that the market-rate is so high, but that it is so low.* There is not a jot of evidence to support the suggestion that the market charges "the average businessman" unfairly high rates of interest, compared to the bank-rate. In fact, if the market was more under the control of the Imperial Bank, these rates would be pushed substantially higher unless the Imperial Bank reverses its present policy of maintaining an unduly high bank-rate.

<sup>5</sup> **Vide** page 278 of the Report.

<sup>6</sup> **Vide** Para 261 of the Report.

### Are the Actually Realised Rates of Interest High?

As regards the price for the use of capital charged to agriculturist borrowers, it is well to remember the distinction between *gross* and *net* rates of interest, and between the rates paid by any *particular individual* and those, paid by a *group* of individuals as a whole. Neither the gross-rate of interest nor the rate paid by a particular individual in a group constitutes the *normal* rate of net interest. It is rather unfortunate that most of the Provincial Banking Committees have ignored these distinctions. The rates given by them and summed up by the Central Committee in paragraph 112 of their report are the *gross* or *stipulated* rates of interest; so also the rates Prof. Thomas relied upon for his generalisation. For instance, the Bengal Committee made no enquiries into the actually realised rates of interest, and quoted as the basis of their generalisation merely the stipulated rates charged by a *single* money-lending firm in a *single* district, viz., the district of Bogra,<sup>7</sup> though they were careful enough to state in para 110 that these rates were capable of two different interpretations, one of them being that "the *mahajan* is obliged to lend against the security of precarious assets, so much so that he is obliged to add the *risk of non-realisation* to the normal return on capital." Indications are not, however, wanting in the reports of these committees that the net or realised rates are substantially lower than the gross or stipulated rates. Almost all the committees state specifically that the rates of interest on *mortgages* are distinctly lower. The Bihar Committee observe: "Indeed mortgages are seldom taken at anything like the rate charged on the original loan, and often the interest paid at that stage is not greater in total than it is at the earlier stages, in spite of the way in which the principal has swelled. Usufructuary mortgages seem to bring in specially low returns, competent witnesses placing them at 9 or even 6 per cent

<sup>7</sup> Vide Appendix VI (6) and para 102 of the Report.

of the debt.”<sup>8</sup> The Madras Committee mention that a “good first mortgage can ordinarily be got anywhere at 12 per cent”<sup>9</sup> and give a detailed table<sup>10</sup> of the number of cases in which different rates of interest were charged on mortgages registered in the sub-registrar’s office, *Chingleput*, during the period 1887—1929, which shows that in the year 1929 *as many as 83 per cent of the mortgages were taken on stipulated rates of interest lower than 11 to 12 per cent*. In the United Provinces 12 per cent was found to be common stipulated rate of interest on mortgages.<sup>11</sup> In the Central Provinces, “if the property is mortgageable and is mortgaged as a collateral, the rate of interest ordinarily varies between 6 and 12 per cent, 10 per cent being a fair average at present.”<sup>12</sup> The Punjab Committee note that “half of the debt of the proprietors of the province has been advanced on usufructuary mortgages” and that “there is general agreement that in this case the return to the lender is somewhere between 6 and 9 per cent”; and invite special attention to the fact that “the best urban business is done at the same rates, and the Imperial Bank-rate itself in the last two years has averaged 6 per cent.”<sup>13</sup> *Bearing in mind the difficulties created by our complicated law of mortgages, it cannot be said that this evidence points to any wide disparity between the bank-rate and the market-rates on mortgage loans.*

Four of the Provincial Committees throw interesting light on the actually realised rates of interest. The Bihar Committee admit that the borrowing rates of the *landlord* class are generally

<sup>8</sup> **Vide** para 75, page 34.

<sup>9</sup> **Vide** para 82, page 110.

<sup>10</sup> **Vide** page 223.

<sup>11</sup> **Vide** pages 112 and 280.

<sup>12</sup> **Vide** para 883, page 157.

<sup>13</sup> **Vide** para 47, pages 30-31 of the Report.

*lower* than the rates at which the raiyats borrow,<sup>14</sup> and that the village money-lender “not infrequently *remits* a part of his full dues when the occasion demands it.”<sup>15</sup> On the question of the net profit from money lending they observe: “We have been unable to collect any really satisfactory evidence of the rate of profit which ordinary rural money-lending gives . . . After making allowance for bad debts, the cost of litigation and remissions, we think it will not be wrong to put the net profit at 15 per cent *out of which the money-lender pays himself his management charges*. The big rural money-lenders in their transactions with the landlord class charge a distinctly lower rate of interest which may be put down for the whole province at 14 per cent. The deduction for bad debts, litigation and remissions must also be put lower, since their loans are much more largely backed by mortgages. An average profit of 10 per cent is probably about right, the smaller men getting as much as 12 per cent, while the very substantial get only 9 per cent on their capital.”<sup>16</sup> The report of the Madras Committee contains an interesting table on pages 174-75, showing the prevalent rates and the extent to which interest was reduced by the law courts in a number of suits taken at random. An analysis of the cases indicates that out of a total of 835 cases, in *as many as 234 cases the rate awarded was reduced to less than 6 per cent and in 429 cases the courts awarded less than 12 per cent*. After saying some very pleasant things about the delays in the law courts, and quoting with approval the remarks of Sir James Colville that “the difficulties of a litigant in India begin when he has obtained a decree,” they observe that “in many cases execution is infructuous,” and that in 1921 “in only 16½ per cent of the applications for execution in courts other than village courts in this Presidency was full

<sup>14</sup> **Vide** page 80, para 36 of the Report.

<sup>15</sup> **Vide** page 36 of the Report.

<sup>16</sup> **Vide** para 78, pages 35-36 of the Report.

satisfaction obtained while part satisfaction was obtained in another 7 per cent," and 239,421 applications proved "infructuous."<sup>17</sup> In paragraph 392 the Committee deal with the cost of litigation as a further difficulty to be faced by any person seeking to recover his just dues through the law courts, and estimate that in order to recover two thousand rupees and interest for two years at 9 per cent, the expenses incurred in the City Civil Court will amount to Rs. 233-7, and that the minimum cost of executing a decree would be Rs. 26-6, "which would increase every time an attempt to execute the decree fails or is delayed by their claimants coming in."<sup>18</sup> They conclude:

"An examination of the costs of such litigation has been made and the result does not show that the creditor is favourably placed. He must spend much to get and execute the decree. Several representations have been made to us about the difficulty accruing to the creditor from the usual practice of the raiyats going to the bankruptcy court. One Tahsildar remarked to us: 'The sense of public honesty possessed by the raiyat is low' and whether or not we regard this as a fact it is evident that if the raiyat is to obtain credit for his notes and to get his debt financed on the best possible terms he must himself mend his ways."<sup>19</sup> In this connection it is worthwhile to quote *in extenso* the observations of the Punjab Committee on the recovery of dues:

"Upon the difficulties of recovery, we have had more evidence tendered than perhaps on any other subject. Witness after witness inveighed against the Land Alienation Act, the law's delay and the inability of the courts to execute their decrees either promptly or fully. All the three points have already been dealt with, and in regard to the two last, it has to be admitted that they put a premium upon default and

<sup>17</sup> **Vide** paras 354-88, pages 180-82 of the Madras Report.

<sup>18</sup> **Vide** paras 392-393 of the Report.

<sup>19</sup> **Vide** para 117 of the Report.

in favour of the bad borrower at the expense of the good. But even when the Land Alienation Act does not apply, and no recourse to the courts is necessary, the recovery in cash presents unusual difficulties. The recovery of land revenue with all the force of state authorities behind it involves the issue every year of about fourteen thousand coercive processes, and until the necessity of paying the income-tax punctually was understood a very large number of penalties—for instance, 5834 in 1924—had to be imposed. When Government itself lends money, it constantly has bad debts. Out of the 55 lakhs advanced under the Agriculturists Loans Act in the five years ending 1928 eight per cent had to be written off as irrecoverable, and under the Land Improvement Loans Act 37 per cent of the amount advanced in Gurgaon and due for recovery is in arrears. Estates under the Court of Wards experience even greater difficulty. On a ten-year average 26 per cent of their cash rents is in arrears at the end of the year. Some of them do money-lending on a large scale and in the three years ending 1929 one of them (*Mumdot*) earned a net return of only 2·86 per cent upon its capital of 5½ lakhs. This figure is particularly significant since the Estate deals almost entirely with the big landlords who presumably offer good security. Of all rural credit agencies, the Co-operative Credit Societies are perhaps the most successful in recovering their dues. Yet, even in their case, though their bad debts are negligible, “we estimate that the cost of management, much of which is the cost of recovery, amounts to over two per cent of the amount on loan. This largely because so few members repay their loans of their own accord,”

Perhaps the most detailed enquiry into the actually realised rates of interest in rural areas is contained in Chapter V of the Central Areas Banking Enquiry Committee's Report. On the basis of the evidence of the Income-Tax Officers, Officials of the Co-operative Department, the previous experience of debt redemption schemes worked out by the Co-operative Department, the account books of money-lenders examined at random, and the decided cases in the law-courts, the Committee came to the conclusion that while the rates of gross interest in rural areas of the three centrally administered tracts are as a general high, the rates of net or realised interest are generally much lower, and pointed out that in estimating the real net interest, due allowance has to be made for the following:—

- (1) Interest given up by the plaintiff in his claim at the time of settling old accounts and renewing them.
- (2) Interest not allowed by the Courts at the stipulated rate.
- (3) Interest not allowed by the Courts during the pendency of the suit.
- (4) Interest reduced or not allowed by the Courts after the date of the decree.
- (5) Number of instalments allowed without interest so long as instalments were paid in time.
- (6) Interest reduced or not allowed on costs.
- (7) Infructuous execution applications and inordinate delays in legal proceedings particularly those relating to execution proceedings.
- (8) Compromise made, particularly, the practice of *Bharna* (i.e., the practice of fixing a price of cattle at a much higher rate than what it is really worth).
- (9) Absolute non-recovery of both principal and interest in a large percentage of cases. (*Vide* para 50, and the Abstract of Cases, picked up at random from the files

of decided cases in the law-courts of Delhi, Ajmere-Merwara, and the North-Western Frontier Province, given in Appendix 7, page 439.)

The Punjab Committee asked all Income-Tax Officers to estimate the net profit from money-lending after all the expenses and bad debts admissible under the Income-Tax Act have been taken into consideration; and have tabulated their replies in statement No. 13 of their report. "These show rates varying from  $4\frac{1}{2}$  per cent to 12 per cent; seven mentioned rates 6 per cent or less and only two rates over 8 per cent."<sup>20</sup> This is confirmed by the evidence of Mr. Brayne, an executive officer in intimate touch with his district, who put the net profit of the rural money-lender in Gurgaon at only 5 per cent.

In the face of this mass of evidence as to unsatisfactory recovery, it is idle to talk of increasing banking facilities and lowering the gross rates of interest in rural area so long as the existing state of judicial administration continues. As the Central Areas Banking Enquiry Committee pertinently remarks, "No strong superstructure of banking and credit can be established on the foundations of non-recovery or inordinate delay in recovery of loans. Even investment in gold or silver ornaments is more economic than loans which are either irrecoverable or recoverable but with great difficulty, and after inordinate delays."<sup>21</sup> Thus the central problem of banking in India is not "the smoothening down of the disparity between the bank-rates and the market-rates in this country"; but the problem of recovery and improvement of security by radically altering the existing law and the system of administration in the country. Once this is done, the gross rates of interest will easily come down. As the Punjab Committee explains: "At present the village rates for unsecured loans are high because recovery is both costly and difficult.

<sup>20</sup> *Vide* para 201 of the Report.

<sup>21</sup> *Vide* para 184.



Eliminate or mitigate this factor, and the rates will automatically fall. *Money is reasonably abundant and lenders are legion, but security is bad.* First-class security is available in jewellery and land, but rarely offered as long as personal security will be accepted; and the cultivator's personal security is often a broken reed."<sup>22</sup>

### Seasonal Loans.

Next in importance to the problem of recovery is the question of providing adequate credit for seasonal loans in agriculture at a cheaper price. Most of the Provincial Committees' reports bear witness to the large volume of loans required for short periods of time. The statistics collected by the Bihar Committee show that the percentage of annual to the total indebtedness of the agriculturists is 34 per cent in Bihar, 39 per cent in Chota Nagpur, 24 per cent in Orissa, and 32 per cent in the Province as a whole.<sup>23</sup> The Central Areas Banking Enquiry Committee estimate that the seasonal loans constitute 41 per cent and intermediate loans 31·9 per cent of the borrowings of the agriculturists.<sup>24</sup> The Bengal Committee place the total requirements for the short-period and intermediate loans for the six million agriculturists' families of the province at 96 crores. The Madras Committee's figure for the estimated amount of short-term loans stands at 70 crores as compared to Rs. 150 crores of the total rural debt. The Bombay Committee's estimate of the amount required for the current needs of agriculture is 32½ crores as against an estimate of 81 crores for the total rural indebtedness of the province. The C. P. Committee's enquiries show that 40 per cent of the ordinary cost of cultivation is annually taken in short-term or seasonal advances by the cultivators. For the whole of India, the Central Banking

<sup>22</sup> **Vide** para 53, page 34 of the Punjab Committee's Report.

<sup>23</sup> **Vide** para 93, page 46.

<sup>24</sup> **Vide** page 68 of the Report.

Committee feel justified in taking a figure of 300 to 400 crores "as a *lower limit* of the cultivator's requirements for short-term and intermediate working capital."<sup>25</sup> The question then arises whether it is not possible by the creation of short-period agriculture paper to provide at a much cheaper rate of interest essentially short-period loans for cultivation purposes at a time of the year, when there is general slackness in trade and industry, when the big shroffs are anxious to find suitable investment for their funds even at 5 per cent and when even the Imperial Bank of India can afford to lend freely at a very cheap rate of interest. The experience of other countries indicates that this is, no doubt, possible, but the essential conditions to be satisfied are:—(a) that there should be *no* uncertainty about the recovery of these crop loans by whomsoever advanced; (b) that the lending authority in the village, be it a co-operative society or a village *Mahajan*, should be connected with the money-market and the Central Reserve Bank of the country, either through the indigenous shroff or co-operative central banks or joint stock banks, and (c) that the bank-rate in the slack season in trade, which is the busy season for agriculture, should be substantially lower.

### **The Agriculturists' Security.**

This naturally raises the question of the agriculturists' security. If the agriculturist is by temperament and habit improvident and extravagant, any improvement in the existing credit facilities will do him more harm than good. But the reports of the Provincial Banking Committees go to show that the actual state of affairs is decidedly reassuring rather than gloomy. The Madras Committee's report shows that improvidence and extravagance of the agriculturists is largely "a myth," the loans for marriages and other ceremonies constituting only 10 per cent of the total according to reports of the Tahsildars and only 2 per

<sup>25</sup> **Vide** para 102.

cent of the total according to those of special investigators appointed for 12 selected villages.<sup>26</sup> The mass of statistics collected by the C. P. Committee and summarised in a statement on pages 128-29 of their report indicates that 66 per cent of the total debts incurred are for productive purposes<sup>27</sup> and that only 14 per cent are for marriages and other ceremonies and only 2 per cent for litigation. The Committee rightly remark that "the mere fact, that in spite of the period of sudden augmentation of values and increased credit facilities, only 4 per cent of the cultivators of Berar are now in a state of hopeless indebtedness, while 45 per cent of their number are entirely free from debt, is, on the other hand a strong proof that mere improvidence is not the main cause of indebtedness." The Bihar Committee's figures show that "only 15½ per cent of the total is the amount borrowed for social occasions"<sup>28</sup> and they express the opinion that "borrowing for litigation is remarkably rare both according to the investigators and the co-operative banks."<sup>29</sup> The Committee further assure us that "the cultivator is probably not so extravagant as he is sometimes pictured." The statistics collected by the Bengal Committee tend to show "that litigation, social and religious ceremonies make but small contributions to the total indebtedness."<sup>30</sup> The U. P. Committee's estimate, apparently a guess work, based on a combination of percentages provided by witnesses and statistics collected by the local Enquiry Committee is 36 per cent for unproductive loans, which includes all borrowings for social and religious functions, litigation and *repayment of old debt*. The Bombay Committee collected figures for only five villages, which indicated only 19 per cent borrowed for marriages and other social purposes.<sup>31</sup>

<sup>26</sup> **Vide** para 101.

<sup>27</sup> **Vide** para 740.

<sup>28</sup> **Vide** para 53.

<sup>29</sup> **Vide** para 106.

<sup>30</sup> **Vide** para 97, page 72, of the Bengal Committee's Report.

<sup>31</sup> **Vide** para 49.

The Assam Committee's estimate of borrowings for social purposes and litigation is only 11 per cent for both Assam Valley and Surma Valley.<sup>32</sup> This bare recital of the findings of the Committees clearly suggests that any measure designed to curtail the agriculturists' credit, on the supposition that he borrows more for wasteful purposes than for productive or necessary purposes, does grave injustice to him.

### **The Agriculturist Not Insolvent.**

Nor is the agriculturist on the verge of insolvency, as the popular clap trap in the Press, on the public platform and even in the Legislative Assembly would lead one to suppose. The economic investigations made in seven selected villages of Ajmere-Merwara, perhaps the least prosperous province in the whole of India, show that not even one out of 131 owners of land had debts exceeding his assets, and that only nine had debts amounting to 50 per cent of their assets; and of the latter, seven were residents of a single village. Similar investigations into the economic position of 259 rural families taken from eleven typical villages in Delhi showed only 21 whose net debt was about 50 per cent or above of their assets. In the North-Western Frontier Province, only 13 out of 665 families taken up for investigation in five different villages had debts exceeding their assets, and only 23 whose debts were 50 per cent or above of the value of their property.<sup>33</sup>

In the Central Provinces, the value of gold and silver in the hands of the agriculturists is estimated at 19·88 crores, while the value of their cattle is put down at 35·70 crores. In other words, excluding agricultural land and house property, the value of the non-agricultural assets of the agriculturists amount to 55·16 crores as against 36·46 crores of the total agricultural debt of the whole

<sup>32</sup> **Vide** page 14.

<sup>33</sup> **Vide** para 30 of the Central Areas Committee Report.

province. In the case of landlords, 45 per cent of them are found to be free from debt; while the percentage of the value of the landed property that their total debt represents is only 15 per cent.<sup>34</sup> As regards cultivators, 46 per cent of them are free from debt. The net outstanding debt per cultivator, excluding seasonal debt, is estimated at 167 rupees, while the jewellery per cultivator amounts to Rs. 144, and the value of the cattle per cultivator to Rs. 180.<sup>35</sup> Intensive surveys carried out by the Central Provinces Banking Committee show that "only 3.9 per cent of the cultivators are hopelessly indebted while their debts amount to 37.4 per cent of the total agricultural debt."<sup>36</sup>

The Bengal Committee state: "Leaving them (the intermediaries) out for the moment, if we assume that the whole of the cultivated land in Bengal, namely 23 million acres according to the return for 1928-29, valued at Rs. 300 an acre on an average as in Chapter II belonged to agriculturists, their property was worth 690 crores of rupees. Thus when even liberal allowance is made for intermediaries, *the Bengal raiyat is far from insolvent.*"<sup>37</sup>

In the Bombay Presidency, the percentage free from debt in three out of five villages taken up for investigation by the Bombay Committee is reported to be 33.3, 36.5 and 37.8 respectively.

In the United Provinces 46 per cent of the cultivators are debt-free<sup>38</sup> while an additional 18 per cent are quite well-to-do.<sup>39</sup> The Assam Committee's investigations in Nowgong show that 20 per cent are free from debt while 50 per cent have debts of Rs. 100 or under. The heaviest debts are reported to be one of Rs. 500 and two others of Rs. 700 each, but the Committee add

<sup>34</sup> Vide page 90, para 173 of the Report.

<sup>35</sup> Vide para 720, page 123 of the Report.

<sup>36</sup> Vide para 137 of the Report.

<sup>37</sup> Vide para 130.

<sup>38</sup> Vide para 339 of the Report.

<sup>39</sup> Vide para 344 of the Report.

that "the assets of these three villages (Chakkurgaon, Sandhara and Baligamgaon) are far more than their debts."<sup>40</sup> The Burma Committee venture to express, on the basis of general impressions of district representatives, the opinion that the only 13.1 per cent of the agriculturists have debts exceeding the value of their property, that 14 per cent belong to class A and are free from debt and have enough cattle and paddy to last until the next harvest begins; 25 per cent belong to class B and consist of families who do not belong to class A but who would be able to pay off all their debt if they used all the money they have and sold all the paddy, but kept their cattle; that 26 per cent do not belong to class A or B but have debts which are less than half the value of their lands (not counting other property); and 22 per cent belong to class D consisting of those whose debts are more than half the value of their lands, but are less than the value of their property. The Bihar Committee have made no estimate of the assets of the agriculturists, but report that only 5 per cent of the landlords are heavily indebted (i.e., their debts exceed 25 thousand rupees); 10 per cent are heavily indebted (i.e., their debts are between 6,615 and 25,000 rupees); 7 per cent are lightly indebted (i.e., their debts are between 1 and 945 rupees), and 35 per cent are absolutely free from debt.

These figures make it plain that no drastic step like a Special Rural Insolvency Act is really needed as a remedy against agricultural indebtedness, and that *adequate* security for credit would exist if only the agriculturist's assets could be mobilised as a basis of his credit.

### Nature of Agriculturists' Assets.

This leads directly to an enquiry into the amount of rural savings and the nature of the agriculturists' assets. Very few Provincial Committees have really gone into this matter fully. But the evidence, such as it is, indicates that a very substantial

<sup>40</sup> Vide Assam Committee's Report, page 42.

amount is actually saved and either locked up in the form of gold and silver, or invested in cattle, land and house property.

The Central Areas Committee estimate that the annual savings of the rural population amount to 23.34 lakhs in Ajmere-Merwara, and to 30.77 lakhs in Delhi, and that the value of gold and silver in the hands of agriculturists is 87.9 lakhs in Ajmere-Merwara, 36.12 lakhs in Delhi, and 629.10 lakhs in the North West Province.<sup>41</sup> The C. P. Committee's investigations based upon the admissions made by 6,581 families indicate a total of 1988.35 lakhs as the amount invested in gold and silver while their estimate of the normal balance of agricultural income over the necessary items of expenditure in a normal year including interest charges at stipulated rates lead them to estimate the annual savings at 12.11 crores.<sup>42</sup> The Punjab Committee have made no estimate of the total amount of gold and silver, but mention that annually about 3½ crores of rupees are spent on the purchase of jewellery in the Punjab. The Central Provinces Committee, which alone has given us an estimate of the value of the cattle in the hands of the agriculturists, state that this amounts to 19.17 crores for agricultural cattle and to 16.55 crores for non-agricultural cattle, making in all 35.73 crores.<sup>43</sup>

Most of the Committees report very large amounts invested in land, in spite of the fact that investment in land is, at its present inflated values, uneconomic when compared to other forms of investment. The C. P. Committee mention purchase of land as a favourite form of investment of surplus capital and add that "experience shows that the desire for land often obscures its real value, and that the prices for land in many cases, particularly in

<sup>41</sup> The normal debt of the agriculturists is estimated to be 213 lakhs in Ajmere-Merwara, 85 lakhs in Delhi. In the N.W.F.P. the net debt of the whole rural population in the busy season is estimated at 940 lakhs.

<sup>42</sup> Vide, pages 111-12 of the Report.

<sup>43</sup> Vide para 1675 of the Report.

the cotton zone where there are rapid fluctuations in the price of agricultural produce, are much often higher than the productive capacity of the soil would justify."<sup>44</sup> The Punjab Committee point out that with a rapidly increasing population, the purchase of land "has become almost a mania," that "so great has been the demand for it that in ten years its prices have been doubled, and in the last five years nearly 6½ crores have been paid by Panjabis, and many more promised, for canal colony land in the Punjab, Bhawalpur and Bikaner," and that "in ten years ending 1928-29 usufructuary mortgage debt increased by 29 crores, over three fourths of which was probably advanced by agriculturists." And this in spite of the fact that "a statement for 3,90,000 acres (148,000 cultivated) administered under the Court of Wards Act in different parts of the Punjab gives a net return of 2½ per cent" and that broadly speaking "in the Punjab, the net return of land to a person owing but not cultivating it, is probably about 3 per cent."<sup>45</sup> The Bombay Committee also report that "when large surpluses accrue, as they did during the period of high prices, purchase of land is a favourite method of utilising these," and "such purchases are often uneconomic and tend to inflate the value of land."<sup>46</sup> According to the Madras Committee's Report "the bulk of lending is done by raiyats and the land changes hands from one raiyat to another."<sup>47</sup> As an investment, "we are further told, "wet lands in the delta yield 5 to 6 per cent on the sum invested." Almost every Provincial Committee reports a tremendous rise in land values during the last twenty years, with the result that land has proved to be, in spite of its low yield, "a good investment for those who bought to sell."<sup>48</sup>

<sup>44</sup> **Vide** para 2251 of the Report.

<sup>45</sup> **Vide** para 221.

<sup>46</sup> **Vide** para 302.

<sup>47</sup> **Vide** page 81, para 107.

<sup>48</sup> **Vide** para 221 of the Punjab Report.



The amount of money sunk in house property is also very substantial. In the rural areas of Delhi, the value of house property per family is estimated at Rs. 600-9, while in Ajmere-Merwara it is estimated at Rs. 288-5.<sup>49</sup> The Punjab Committee tell us that "the whole aspect of the countryside in Jullunder has been changed in the last thirty years, by the building of *pakka* houses, and it is estimated that in Bundala alone (population about four thousand) six lakhs have been spent in this way."<sup>50</sup> These figures go to suggest that a detailed enquiry into the amount of capital invested in house property in other province is needed for a proper estimate of the value of agriculturists' assets.

The foregoing survey of the main form of assets of the agriculturists indicates clearly the general lines of banking development. The task of educating the agriculturists to abstain from those forms of investment which yield little or no income or give a return lower than even Government securities, must necessarily take generations; and the only practicable remedy at present seems to be in the direction of creating forms of credit designed specially to mobilise these assets as a basis of credit. Any legislation that seeks to lower the value of these assets as a security, or attempts to judge the solvency of an agriculturist by reference to his *income* rather than property or declares inalienable any of his favourite forms of investment, will not only militate against the successful working of any special form of credit designed for this purpose, but would confirm the agriculturist in his *uneco-* nomic habits.

### **Diversion of Local Funds.**

One other aspect of the matter needs special mention. The reports of some of the Provincial Committees contain here and there a hint that the existing banking and financial organisation

<sup>49</sup> Vide page 145 of the Central Areas Committee's Report.

<sup>50</sup> Vide page 45 of the Report.

and the lines of banking development in India are doing considerable harm to the countryside as well as to some inland centres of trade and industry.

The Bombay Committee are convinced by the evidence recorded by them that "the diversion of funds outside the districts has in some centres gone too far," and that "the pinch is beginning to be felt seriously by the local trade, industry and agriculture." They are of opinion that "in view of borrowing from the rural and urban areas under the jurisdiction of local and provincial authorities, the Central Government incur a certain measure of responsibility for seeing that the local population have the benefit of the general savings of the community for their economic development," and suggest "that the Provincial Government should have a claim on the Central Government for cheap funds for the development of agriculture, trade and industry and for the grant of loans to public bodies, such as municipalities and local boards on reasonable terms."<sup>51</sup>

The Central Provinces Committee likewise comment on the considerable sums that have been invested in Post Office Savings Banks and Postal Cash Certificates and point out that they are open to the objection that "they operate as agencies for diverting the wealth of the countryside for the benefit of urban enterprise."<sup>52</sup> The evil at present, they admit, is not great as "most of these savings come from urban areas"<sup>53</sup>; but they are definitely of opinion that "in future if rural areas are to obtain the full benefit from a wholesale and successful campaign for development of the investment habit in the countryside, we must be careful to see that the capital invested in rural areas is made use of to provide corresponding credit facilities for agriculture."<sup>54</sup>

<sup>51</sup> **Vide** para 291 of the Bombay Report.

<sup>52</sup> **Vide** para 2265.

<sup>53</sup> **Vide** para 2266.

<sup>54</sup> **Vide** para 2267.

The Central Areas Banking Enquiry Committee raise a much wider issue. Referring to the Imperial Bank's activities in starting branches, they observe: "Only a small portion of the amounts collected as deposits by the Imperial Bank in these areas is actually utilised by it for the purpose of financing local trade and industry, and as a result of opening branches of the Imperial Bank there is a marked tendency to divert a large portion of the local funds from local trade and industry to other provinces."<sup>55</sup> Similar remarks are made in respect of the branch activities of the Indian Joint Stock Banks. "The branches of quite a large number of banks," they point out, "aim more at collecting deposits than helping the development of the local areas by financing local trade and industry."<sup>56</sup> And they conclude by saying that this general complaint is true also of the investment policy of insurance companies and Government.<sup>57</sup>

If these tendencies persist, it is obvious that the development of banking and investment habit may prove to be a curse both for the rural areas and inland centres of trade, for it may divert to the Presidency towns all available savings, which now seek investment in loans to agriculturists and local traders.

### Conclusion.

To conclude, the lines of sound banking development in India would seem to lie in the direction of improving considerably the facilities for recovery of loans, of establishing a Central Bank linked with local credit agencies so as to facilitate lending out substantial sums for crop loans during the cultivation season, of creating special forms of credit institutions for mobilising the frozen assets of the agriculturists, of taking stern measures to bring the value of land in harmony with its yield and so releasing

<sup>55</sup> Vide para 225, page 374.

<sup>56</sup> Vide para 234.

<sup>57</sup> Vide para 234.

the savings of the people for investment in banks, and of putting a check on the tendency to divert to the Presidency towns funds from the local areas and inland centres of trade for the benefit of the Presidency towns and other large trading centres.

Have these essential conditions been borne in mind by the Central Banking Committee while making their recommendations? It is impossible to notice here in detail the implications of their various recommendations which even when summarised take as many as 24 pages of close print. But the general impression of the careful reader, who can distinguish the wood from the individual trees, would be one of disappointment. Their remedies for "the existing hardships experienced by honest creditors in recovering their dues" come last in point of order<sup>58</sup> and are summed up in the previous sentence: "The recommendations made by the Provincial Committees in this connection will be found in Appendix III where we have indicated our own views in the matter." A reference to this Appendix will show that almost all the recommendations made by the Provincial Committees in this behalf have been rejected. Instead of suggesting remedies for the general disease, they proceed to recommend protective legislation for occasional symptoms of hardship, arising precisely because of the general disease, such as legislation on the lines of the Punjab Regulation of Accounts Act of 1929, a special Rural Insolvency Act, stiffening of the Usurious Loans Act, etc., etc. Regarding crop loans, the Committee practically ignore all other credit agencies except the cooperative institutions which according to their own admissions, have touched only "15 million people in India"<sup>59</sup> and "cover but a small portion" of agriculturists' needs<sup>60</sup> and which in spite of special facilities for recovery have heavy "overdues" to their discredit. If the financing of the large volume of crop loans has to wait on the growth of sound

<sup>58</sup> See page 93 of the Report.

<sup>59</sup> **Vide** page 113.

<sup>60</sup> **Vide** page 132.

co-operative societies, one will have to wait till the millennium dawns. And it is futile to recommend, without providing quick methods of recovery for crop loans, that "banks should take the initiative in the matter of encouraging usance bills for the financing of village bankers by suggesting this method to shroffs seeking accommodation from them."<sup>61</sup> No effective measures are suggested for mobilising gold and silver as the basis of banking credit beyond the pious observation that "if the joint-stock banks would liberally extend the system of advances against precious metals including ornaments, the fairly well-to-do among the cultivators would be saved to some extent from the clutches of the money-lender,"<sup>62</sup> though the Manager of the Northern India Branches of the Imperial Bank agreed that "there are great possibilities of increasing the business of advancing loans against gold and silver ornaments and reducing the rate of interest on such advances during the slack season, if the Imperial Bank could work through agents who can protect the clients from undue publicity and who are more in intimate touch with the public, particularly the agriculturists,<sup>63</sup> and who in return for their services are left with a "workable margin."<sup>64</sup> The recommendations regarding mortgage credit are halting and unsatisfactory. Thanks to the foreign banking experts, the Committee were forced to consider the operation of the Land Alienation Act "which makes it impossible for the lender to secure the right to a free sale of the land which through default of the mortgagor may have to be taken over by him."<sup>65</sup> But while recognising that "the commercial land mortgage bank may perhaps be better suited to finance big landlords or zamindars"<sup>66</sup> and recommending

<sup>61</sup> **Vide** para 597.

<sup>62</sup> **Vide** para 252, page 193.

<sup>63</sup> **Vide** para 230, C. A. Banking Enquiry Committee's Report.

<sup>64</sup> **Vide** 1652, Evidence before the C. A. B. E. Committee in Delhi.

<sup>65</sup> **Vide** para 227.

<sup>66</sup> **Vide** para 199.

“ the development of well-organised *joint stock* land mortgage banking in this country for the benefit of the numerous classes of landowners who cannot be adequately served by the co-operative credit organisations ”<sup>67</sup> they not only limit the benefit of the necessary amendment to the existing restrictive legislation to *co-operative* land mortgage banks only but also circumscribe its scope by adding that “ the sale may be restricted to the agricultural classes according to the provisions of prevailing legislation ” so that “ no question of policy in regard to preventing expropriation of these classes is intended to be touched by this particular recommendation.”<sup>68</sup> Other difficulties created by the existing mortgage law and legal procedure, though pointed out by some of the Provincial Committees, are simply dismissed with the easy-going remark : “ We recognise that other considerations may be involved; and we must accordingly leave it to the governments concerned and their legislatures to weigh the various considerations involved, and determine what action should be taken in the matter.”<sup>69</sup> Nor are the details worked out with care as one had a right to expect from the Central Banking Committee. For instance, it is obvious that with money borrowed at 9 per cent, no borrower is in a position to repay out of his *income* a loan to the extent of 50 per cent of the value of his land if land as an investment yields, as it does in the Punjab, only 2½ to 3 per cent. The complaints of the Provincial Committees against the diversion of local funds by banks and Government meet with no better fate. The remedies suggested by one of the Provincial Committees are dubbed as “ unworkable ”; and the public is asked to derive consolation from the fact that “ such a complaint is often made in other countries also in a general way against the joint-stock banking system ” and to share with this expert committee the hope that “ when

<sup>67</sup> **Vide** para 235.

<sup>68</sup> **Vide** para 228.

<sup>69</sup> **Vide** para 562.

the Reserve Bank is established, it will make it its policy to see that the requirements of the various parts of the country in regard to banking facilities are duly met."<sup>70</sup> And as regards the Government, the Committee, while declaring themselves against ear-making a specified portion of Postal Saving Deposits and Government borrowings for agricultural or industrial purposes, "abstain from passing judgment on the Government's borrowing policy, the amount, the time and the terms of their borrowings and their effect on the general level of interest rates and on the development of trade, industry and banking."

# THE NATURE AND INTENSITY OF DEMAND

BY

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Demand for a commodity is the (unconditional) desire to obtain that commodity by an act of exchange, that is, by offering some other useful material or immaterial commodity or commodities in exchange for it. Thus, demand is a particular kind of desire leading, under certain favourable conditions, to the purchase or exchange of commodities. The essential requisites of demand are, therefore, three in number. Firstly, there must be a want for the commodity in question; secondly, there must be the ability to offer some other useful thing in exchange for it; and thirdly, there must be the willingness to do so. Hence, there is a demand for a commodity when a person is willing and capable of offering something in exchange for it, no matter how small a quantity of that something is.

There are writers who define the word demand in terms of its quantity, that is, in terms of the quantity of the commodity purchased instead of defining it in terms of the essential desire as we have done above.<sup>1</sup> Thus, Mill writes, “(we must) mean by the word demand, the quantity demanded,” and Messrs. Weston and Crew, in their dictionary of Economic terms define the term

<sup>1</sup> Many other writers have explained the term correctly, but a few only have made an attempt to frame logical definitions. Ely says, “Effective demand is sometimes defined as desire coupled with the ability to pay.” Seager writes, “Demand . . . denoted effective desire coupled with ability to pay the current price for the desired object. And Cairnes defines demand as “the desire for commodities and services, seeking its end by an offer of general purchasing power.”



demand as "the amount of the article which will be bought at a given price," but later, changing the view-point, express the essentials of demand by saying that demand is wish to purchase plus purchasing power.

To define demand thus in terms of the commodities purchased is really to confuse the connotation of the term demand with the quantitative measure of its denotation.

According to our definition of the term demand, almost every person can be said to have a demand for diamonds (unless he or she is a diamond hater) because every person can generally offer something or the other for a diamond. There are people who would reject this definition of demand on the ground that poor persons who can offer only a few annas for a precious diamond cannot be said to have a demand for it. Such an objection to our definition is the result of confusing the connotation of the term demand with its denotation. As we shall see later, such poor persons certainly have a demand for diamonds but the intensity of their demand is too low to give rise to the purchase of those diamonds. It would be much less objectionable if we said that such poor persons have no demand for diamonds at the current price, say, when the price is Rs. 1,000 per diamond. But then what is really meant by demand here is its intensity (measured in terms of the quantity of the commodity purchased). In the case of such poor persons, the demand curves, as commonly drawn, are too low to cut the corresponding supply curves; but the demand is there all the same. Hence, there arises the necessity, sometimes, of prefixing the word "effective" or "efficient" to the term demand. Thus, Seager writes, "Demand . . . denoted effective desire coupled with ability to pay. . . ." And Ely says, "Effective demand is sometimes defined as desire coupled with the ability to pay." Marshall, however, is more careful, and he preserves the true sense of the term demand when he says, "His demand becomes efficient, only when the price which he is willing to offer reaches that at which others are willing to sell."

### The Measurement of Demand.

It is really the measure of the intensity of demand that people have in view when they define demand in terms of the quantity of the commodity bought. Walker's statement—"demand means the quantity of a given article which would be taken at a given price"—becomes more correct when the words "the intensity of demand is measured by" are substituted for the words "demand means."

There are two ways in which demand is generally measured. Some writers measure it by the units of the commodity bought while others measure it by the quantity of purchasing power offered in support of the desire for commodities.

Demand being defined as a desire, its measurement must involve the consideration of the intensity of the desire for the commodity which is to be procured by an act of exchange. Hence, the demand for one unit of a commodity is measured by the intensity of the desire or the keenness with which that unit is desired (in exchange for something else). The desire, being a mental feeling, cannot be directly measured and hence recourse is had to the medium of money—the measuring rod of all motives and desires. If a person is willing to offer Rs. 10 for the first unit of a commodity we may, for practical purposes, argue that Rs. 10 measure the intensity of his desire for that unit, and that, therefore, the same amount also measures his demand for that unit. His total demand for the commodity (and not for one particular unit) is measured by adding together the amounts which he is willing to pay for the successive units of the commodity. If he is willing to pay Rs. 6 for the second unit, Rs. 2 for the third unit and nothing for the fourth unit, we may measure his total demand by adding up these amounts and say that his total demand for the commodity, when measured in money, is Rs. 18.

But such a measurement of the total demand is of very little use except when the chief object is to calculate the total utility or the consumer's surplus. The common method of measuring

demand is first, to assume a fixed price and then to measure the total demand at that price. If the market price in the above example were given as Rs. 6, we know that the person would purchase only two units and his (effective) demand would be measured by Rs. 16. To say that at the price Rs. 6 his demand is Rs. 16 is to express in a crude and confusing way what can be clearly and directly expressed by saying that his demand for two units of the commodity is measured by Rs. 16.

Though technically correct, our method of measuring demand is of very little use. Some writers, perhaps for this reason, prefer to measure demand, in terms of money, by the total amount paid for the commodity bought at a fixed price. But, we should remember, the amount actually paid can never be said to measure demand, which is a desire to buy a commodity. The desire can be measured by the amount which a person is willing to pay and not by that amount which he actually pays, under a competitive system of sale. Although the amount which he actually pays varies directly with the amount which he is willing to pay, yet it does not necessarily vary proportionally with it, and, therefore, in no way can the amount actually paid for the commodity be said to measure the demand for it.

The effective demand, which means the desire to purchase the commodity at the prevailing price, varies with the intensity of the desire with which the various units of the commodity are wanted and with its price. In other words, we may say that, the intensity of effective demand is a function of three variables, the initial intensity of desire (the desire for the first unit), the rate of decrease of this intensity, and the price. The price being fixed, the effective demand, therefore, varies with the other two variable factors: initial intensity of desire and the rate of its diminution. Hence, one man's effective demand differs from another's due to differences in (1) the initial intensity of their desire, and (2) the rate of their decrease. Effective demand is measured by that portion of the desire which can be satisfied by

actual purchase of commodities. For this purpose, therefore, it is necessary to presuppose a (given) fixed price. All that can really be measured, when the number of units of a commodity purchased at a given price is known, is the marginal intensity of the desire, that is, the intensity of desire for the marginal unit. For instance, if a person buys 4 units of a commodity at the price Rs. 10 per unit, it is obvious that the intensity of his desire for the fourth unit of the commodity is Rs. 10. More than this we cannot measure with these insufficient data. It is true, of course, that the greater the number of units which one can buy at the given price, the greater is, generally speaking, (perhaps always) the intensity of the total demand. But this only shows that the number of units purchased at the given price is an indication of the intensity of the demand and not that it is a measure of it. The method of measuring demand by the number of units purchased is, therefore, open to the same objections which were levelled against the former manner of measuring it by the amount of money actually expended in the purchase of the commodity.

Effective demand, being that demand which can be satisfied by exchange or purchase of a commodity, should really be measured by the total amount a person is willing to pay for all the units of the commodity purchased. If I am willing to pay Rs. 10 for the first unit, Rs. 6 for the second and Rs. 4 for the third I will buy 3 units when the price is Rs. 4 per unit. My effective demand is, therefore, measured by Rs. 10 plus Rs. 6 plus Rs. 4, that is, by Rs. 20.

However, demand as used in the enunciation and explanation of the law of demand, is not thus measured. There demand stands for effective demand, as defined by us, and is measured by the units of the commodity which are purchased or intended to be purchased. In the above example, therefore, the demand at the price Rs. 4 per unit, is said to be three units. And when it is stated that demand increases when the price falls, it is the increase in the number of units purchased that is meant to be

indicated and not the increasing of the total intensity of desire with which those units are purchased.

Sidgwick has pointed out that demand may increase in two different ways. A clear understanding of these two kinds of increases is necessary in order to perceive the precise causal relation between price and demand. In the absence of two different terms to signify the two distinct kinds of increase of demand a great deal of confusion is likely to arise.

The demand increases when price falls. This law of demand states that the effect of a fall of price is the increase of demand. Hence the increase of demand is the result of the fall of price. But when it is said that an increase or rise of demand leads to a rise of price, the change of demand is the cause and the change of price the result. The causal relation is reversed. The first kind of increase is called by Sidgwick extension of demand and the second, intensification of demand.

It will be clear from the foregoing discussion that in the expression "extension of demand" the term demand is used in the sense of effective or efficient demand, for when the price falls the intensity of the desire for a particular unit of the commodity does not necessarily increase, only a greater portion of the total desire is satisfied.

In the expression "intensification of demand" the term demand is used in its true sense, signifying the desire to procure a commodity by an act of exchange. The increase of demand that tends to give rise to an increase of price is a real intensification of the desire for the commodity concerned. It may be noted that intensification of demand is represented by raising the demand curve to a higher level.

# RENT IN RELATION TO PRICE

BY

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The relation of rent to price has long been a subject of controversy among economists. Broadly speaking, there are two different theories about it. According to one, rent is not a part of the cost of production, and hence it does not influence price. The other theory says that rent is as much a part of the cost of production as wages, and affects price in the same way in which the earnings of labour do.

Of these two theories, the first is associated with the name of Ricardo. "Corn is not high," says he, "because a rent is paid, but a rent is paid because corn is high . . . that corn which is produced with the greatest quantity of labour is the regulator of the price of corn; and rent does and cannot enter in the least degree as a component part of its price."<sup>1</sup>

Rent, according to Ricardo, is purely a surplus. When lands of different fertility and situation are cultivated, the cost of production in the poorest lands thus cultivated is the highest, and if society needs the produce raised from them, the price must be sufficiently high to cover this cost. Since the cost of production in the case of superior lands is less, there accrues a surplus income from their cultivation. This surplus income, owing to the competition of farmers, goes to the landlord in the form of rent.

As cultivation is extended to inferior lands, Ricardo says that it may be profitable to employ additional capital and labour to

<sup>1</sup> Principles of Political Economy and Taxation, edited by Gonner, pp. 51—55.

those lands which are already cultivated. The return no doubt will diminish; but it also diminishes when cultivation is extended to poorer lands. If the diminution in return is not greater in the former case than in the latter, such application of labour and capital will be made. Price will cover the cost of producing this additional amount of supply. There will be a surplus in this case also from the intra-marginal doses of labour and capital; and this surplus will be paid as rent. Thus in whatever way the supply of agricultural produce is increased, the marginal cost rises; and it is this marginal cost which determines price. Since rent is no part of this marginal cost, it does not enter into price. On the other hand, rent is paid, because rising prices, by extending cultivation to inferior lands, or by a more intensive cultivation of lands which are already under the plough, produce a surplus or differential return to different doses of labour and capital.

This Ricardian doctrine was first challenged by Jevons who enunciated the counter theory that "so far as cost of production regulates the values of commodities, wages must enter into the calculation on exactly the same footing as rent."<sup>2</sup> Jevons says, "If land which has been yielding £2 per acre rent as pasture be ploughed up and used for raising wheat, must not the £2 per acre be debited against the expenses of the production of wheat?"<sup>3</sup>

Of the two theories stated above, that advocated by Ricardo has dominated economic thought and writings up to the present time. The most outstanding supporter of the Ricardian doctrine is Marshall who holds a unique position among all modern economists. Marshall develops the marginal analysis adopted by Ricardo, and says that the employment of capital and labour in the cultivation of land is carried to the margin of profitability.

<sup>2</sup> Preface to *The Theory of Political Economy*, Second Edition.

<sup>3</sup> This idea first occurs in Mill's '*Principles of Political Economy*.' Mill generally accepts the Ricardian theory and considers this case as only an exceptional one. See *Principles of Political Economy*, Book III, Chap. VI. Sec. 9.

As regards the way in which the surplus arises, he says, "Since the return to the dose on the margin of cultivation just remunerates the cultivator, it follows that he will be just remunerated for the whole of his capital and labour by as many times the marginal return as he has applied doses in all. Whatever he gets in excess of this is the surplus produce of the land."<sup>4</sup> Marshall thinks that so far as this argument is concerned, it is not necessary to suppose that the land on the margin of cultivation should always exist. "What we want to fix our minds on is the return to the marginal dose."<sup>5</sup> We thus see that the idea of the intensive margin which is obscure in the writings of Ricardo, is brought out more clearly by Marshall.

Regarding the relation of rent to price, Marshall arrives at the same conclusion as Ricardo does, although the argument used is somewhat different. The payment of rent by the farmer to the landlord does not, according to Marshall, affect the general conditions of demand and supply and therefore price. "The general conditions of demand and supply or their relations to one another are not affected by the division of the produce into the share of rent and the share needed to render the farmer's expenditure profitable."<sup>6</sup> From this it is a clear implication that the raising of agricultural produce is, in spite of rent, carried to the furthest possible limit under any given condition of demand, and would not be increased even if all rent were remitted.<sup>7</sup>

Let us now examine these theories. It must be said at the outset that, unlike the other factors of production, land is a free

<sup>4</sup> Principles of Economics, p. 155.

<sup>5</sup> *Ibid.*, p. 154.

<sup>6</sup> Principles of Economics, p. 427.

<sup>7</sup> A similar idea is also expressed by Ricardo. He says, "No reduction would take place in the price of corn although landlords should forego the whole of their rent. Such a measure would only enable some farmers to live like gentlemen. . . ." Principles of Political Economy and Taxation, Gonner's Edition, p. 52.



gift of nature, and its supply can neither be increased nor diminished by man. A rise in the earnings of the other factors will bring about an increase in their supply, while a fall will produce the opposite effect. No such response is, however, made by land to its earnings. A remuneration to the other factors is a necessary condition for the maintenance of their supply. It therefore enters into their supply price. But for maintaining the supply of land, no remuneration is thus necessary. That supply would remain as it is, even if no rent were paid. From the standpoint of society as a whole, there is no cost involved, so far as the employment of land is concerned.

This absolute fixity in supply is a characteristic of land when we look at it from the standpoint of society as a whole. But in regard to any particular crop, the supply of land is elastic and responds to the remuneration that is offered to it. If the cultivation of hops begins to yield larger surplus than that of oats, there is bound to take place some transfer of land from oats to hops. When there are competing demands for land by different crops, the supply of land for the production of any one of them, will be determined, among other things, by the rent or surplus yielded by it in comparison with the rent obtained from the others. The amount of rent thus affects the supply of the crop and hence its price.

There is only one difference between land and the other factors. When the remuneration to the latter in any particular use increases, their supply in that use may be increased in two ways: by a diversion from other uses, and also by an addition to the total supply. But when the rent obtained in any particular use rises, its supply in that use is increased only by a transfer from other competing uses, because the total supply cannot be increased. From this it also follows that a rise in rent in any use will not lead to an increase in the supply of land in it, if the rent obtained from other uses rises in the same proportion. In other words, it is a comparative and not merely an absolute change in rent that affects the supply of land in particular uses. For these

reasons the elasticity in the supply of land in particular uses is less than those of the other factors of production. But in so far as this elasticity exists and the supply of land in particular uses responds to its remuneration, price is affected by rent.

Ricardo does not take into consideration the fact that different crops compete with one another for land. According to him, corn is the only produce raised from it. The entire supply of land in a country is therefore available for its cultivation whether the rent obtained from it is high or low. There is thus no supply price of land which has to be included in the supply price of corn. On the hypothesis made by him, Ricardo's doctrine about the relation of rent to price is fundamentally true.

It must, however, be said that the Ricardian doctrine, being based on a hypothesis divorced from real life, fails to give a correct explanation of the actual relation of rent to the prices of particular products. In trying to find the relation between the price of any particular agricultural product and the rent that is paid for the land on which it is grown, we cannot ignore the fact that there are alternative uses of land and, therefore, the supply of land for any particular use possesses elasticity and is determined among other things by the rent that is obtained from that use.

Unlike Ricardo, Marshall realises the competing uses of land. He even recognises the fact that the surpluses obtained from different crops determine the respective areas that will be devoted to their cultivation. Marshall says, "Thus each crop strives against others for the possession of the land; and if any one crop shows signs of being more remunerative than before relatively to others, the cultivators will devote more of their lands and resources to it."<sup>8</sup> Again speaking of the competition of different crops for the same land he says, "In this case, the surplus which he (farmer) could obtain by growing, say, oats upon it would come into his mind when deciding where to set the limit to his production of hops."<sup>9</sup>

<sup>8</sup> Principles of Economics, p. 435.

<sup>9</sup> *Ibid.*, p. 436.

But though Marshall realises these facts, he does not admit that rent is an element in the cost of production and therefore it affects price. To the question asked by Jevons, which has been quoted before, he gives a definitely negative answer. He says, "There is no connection between the particular sum of £2 and the expenses of production of that wheat which only just pays its way."<sup>10</sup> Again speaking of the competition of oats and hops for the same land, he says, "But even here there would be no simple numerical relation between the surplus or rent which the land would yield under oats and the marginal costs which the price of hops must cover."<sup>11</sup>

Marshall's argument on this point does not seem to be very convincing. It will be noticed from the quotations given above that once he says that there is "no connection," and then he maintains that there is "no simple numerical relation," between the marginal cost of producing a crop and the rent yielded by a rival. As regards the first view, it is difficult to maintain it; while as regards the second, there is not much significance in it. If on account of a rise in demand, the rent obtained from hops increases relatively to that obtained from oats, there will be some transfer of land from oats to hops; and, as a consequence, the marginal cost of producing oats will rise. How can it be said then that in such a case there is no connection between the two? It is of course true that there is no simple numerical relation between them. But the absence of such a relation does not mean that there cannot for this reason be a causal connection. There is no simple numerical relation between the interest on the capital represented by a machine in a business and the cost of the marginal unit produced by it. We do not for this reason say that the interest that has to be paid for the employment of the machine does not form a part of the normal cost of production.

<sup>10</sup> Principles of Economics, p. 437 n.

<sup>11</sup> *Ibid.*, p. 436. It should be noted that here Marshall takes his stand on the absence of rent in the marginal cost of production.

Marshall's explanation is that in such a case, a rise in rent merely serves as the medium through which the rise in the marginal cost and price of oats is brought about. The "truly operative cause" is the increase in the demand for land or "the growing scarcity of land" for hops and other crops.<sup>12</sup> This is depriving rent of the importance which under similar circumstances is attached to the earnings of the other factors of production. The remuneration to land as that to the other factors is not an independent phenomenon. It is the result of other causes. But that does not constitute a sufficient reason why it should not be regarded as the cause of other phenomena which are produced by it. If, on account of a greater demand for labour in the cultivation of hops, wages rise and the marginal cost of producing oats increases as a consequence, do we not say that the price of oats is higher because wages are higher?<sup>13</sup>

In an article published in the *Economic Journal* for September 1930, Mrs. Holland says that there is a real distinction between the two cases stated above. Thus according to her, "the new level of rent is ultimately an effect of the increased aggregate demand for a fixed supply of land for all uses, whereas the new level of wages is not only the effect of the increased aggregate demand for an existing supply of labour for all uses, but also an active force leading to an alteration in the supply of labour as a whole, which in turn reacts upon the level of wages. . . . It supplies conclusive reason why wages should be considered an ultimately 'operative cause' of a rise in the price of oats in the given conditions, whereas rent should not."<sup>14</sup> It may be said here in reply that the rise in the price of oats that persists in the long run in the given conditions is also ultimately the effect of the increase in the aggregate demand for labour. The reflex influence

<sup>12</sup> *Principles of Economics*, pp. 436-37 n.

<sup>13</sup> See *The Economic Journal*, March 1930. Article on "Marshall on Rent," by F. W. Ogilvie.

<sup>14</sup> *The Economic Journal*, September 1930, p. 375.

of wages on the supply of labour, and hence on wages and price, tends to counteract this effect and causes the price of oats to fall rather than to rise. In the second place, it is important to remember that although the level of rent does not react upon the total supply of land, the area to be devoted to any particular crop is certainly affected by the rent that is obtained from its cultivation. In respect of any particular agricultural product, the level of rent is not merely a passive thing determined by other causes, but also an 'active force' producing its own effects on the supply of land available for its cultivation and hence on its cost of production and price.

Marshall says that the division of the produce between the farmer and the landlord does not affect the general conditions of demand and supply or their relations to one another.<sup>15</sup> This statement cannot be made in regard to any particular agricultural product, if there is a discriminating treatment of the different products in this respect. If all rent be abolished irrespective of the crop that is grown, the comparative advantages in their production will not change; and so the general conditions of demand and supply will not be affected. But if the rent of any particular crop be remitted, the rent on other crops being the same, this will lead to an increase in the employment of land for the production of that crop and so its price will fall.

It is interesting to discuss in this connection the incidence of the taxation of rent. A tax on rent is generally supposed to leave undisturbed the price of agricultural products. The burden therefore falls entirely on the landlords. This, however, depends on the form of the tax. If it is levied on the rent obtained from a particular agricultural product, say, oats, while the rent obtained from other products is not taxed, the net surplus from this crop will decrease relatively to those from others. The production of oats will therefore diminish with the result that its price will rise. The incidence of the tax thus falls partly at least

<sup>15</sup> Principles of Economics, p. 427.

on the consumers. But if the tax is imposed on the rent obtained from all crops alike, the relative profitability of growing them will be the same after the imposition of the tax as before it, and so there will be no gain from the transfer of land from one crop to another on account of the tax. And since the total supply of land is unaffected by the amount of rent, whether it be high or low, the production of the different crops will not diminish and their prices will not rise. The burden of the tax will fall entirely on the landlords. In this respect, the taxation of rent is different from the taxation of the earnings of the other factors. A general tax on wages, interest, or profit will reduce the supply of these factors and will thus raise the prices of their products. Such a tax, unlike a tax on rent, will partly at least be borne by the consumers.

We have seen in the preceding pages that the Ricardian doctrine of rent and its relation to price is primarily based on the existence of a no-rent margin. Both Ricardo and Marshall lay stress on the absence of the element of rent in the marginal cost of production. It has been pointed out by some writers that in addition to the no-rent margins—extensive and intensive—there is a third margin called the margin of transference.<sup>16</sup> If it is supposed that only one kind of agricultural produce, say, corn, can be raised from land, there are only two margins—extensive and intensive—both of which are free from the payment of rent. But with competing agricultural crops, a third margin comes into existence. It has been stated above that the distribution of land over different uses is made on the basis of the comparative surpluses yielded by them. A plot of land will be applied to that use in which it produces the largest surplus.

There are some pieces of land in a country which are eminently suitable for the production of a particular crop. They bring

<sup>16</sup> Henderson, *Supply and Demand*, pp. 94—98: H. Gordon Hayes. Article on "Land Rent and Prices of Commodities in the American Economic Review, June 1927; D. H. Buchanan, Article on "The Historical Approach to Rent and Price Theory," in *Economica*, for June 1929.

the largest return or surplus when used in the production of this crop. There will be others which are more suitable for this than for other crops; but in this case, the comparative advantage is less. Finally, there will be still other pieces of land which possess equal advantage in the production of two or more crops, and so yield the same surplus whichever of these crops is grown. In deciding the area that will be devoted to any crop, farmers will first of all select the lands that constitute the first group. Then they will choose the second group of lands. When they come to the third, they are on the margin of doubt as to whether they should devote these lands to this particular crop, or to some other competing crop having the same advantage. The lands which constitute the last group are thus on the margin of transference; and all the units of the agricultural product which are grown on them are marginal, because they are on the margin of not being produced at all. Any change in the comparative surpluses yielded by competing crops will lead to some transfer of land from one crop to another and will therefore shift the position of the margin of transference.

Of the three margins stated above, the margin of transference is by far the most active and important. Changes in the supply of any agricultural product are mostly brought about through this margin.<sup>17</sup> For any particular crop the extensive margin may not even exist, there being no no-rent land under it. As the lands on the margin of transference are all rent-bearing and the entire produce of such lands is marginal, it is difficult to maintain that rent is no part of the marginal cost of production.

One of the peculiarities of rent, as it is commonly supposed, is that it is a surplus. This surplus is supposed to arise in two ways: from a differential productivity and from intensive cultivation. In so far as rent is due to the differential productivity of different lands, it resembles the excess of the earnings of a more efficient over those of a less efficient labourer or businessman.

<sup>17</sup> See Article on "Land Rent and Prices of Commodities," by H. Gordon Hayes in the *American Economic Review*, June 1927.

As regards the surplus that arises from intensive cultivation, it may be said that land does not possess any peculiarity in this respect. It has been pointed out by some writers that a similar surplus may also be obtained from the intensive use of any of the other factors of production.<sup>18</sup> In the case of rent we take land as constant and suppose that successive doses of labour and capital are applied to it until the additional return so diminishes as to cover only the additional wages and interest. In the same way, if any factor is kept constant and the other factors are applied in successive doses until the margin of profitableness is reached, there will be a surplus accruing from the excess of the returns to the intra-marginal doses over the return to the marginal dose of those other factors. As Mr. Ogilvie says, "A one man tobacco-nist doses himself with borrowed capital until, at the margin, his additional receipts only just cover the additional interest which he has to pay; multiplying this marginal return by the total number of doses of capital, and subtracting the result from the total produce, he finds that there is a surplus produce from his labour. Or a milliner doses the capital of her shop with the labour of assistants until her additional receipts only just cover her additional wages bill: following the farmer's and the tobacco-nist's example, she in turn will be able to show that there is a surplus, this time from capital."<sup>19</sup>

Against this criticism, Mrs. Hollond advances two arguments in the *Economic Journal*, September 1930. She says that, in the long run, from the point of view of society, the return to land is peculiar; for it does not affect the total supply of land, whereas the returns to the other factors influence their supplies and thus enter into the cost of production. It should be noted here that the question of rent and its relation to cost may be considered from three points of view: the individual producer, a particular

<sup>18</sup> See Cassel, 'Theory of Social Economy,' Vol. I. pp. 272-73; also Hobson, 'The Economics of Distribution,' pp. 133-37.

<sup>19</sup> The *Economic Journal*, March 1930, p. 6.



agricultural product, and, finally society as a whole. Of these, the second is the most relevant and most important in determining the true relation between the price of a thing and the rent of the land that is used in producing it. From such a standpoint, as we have seen before, rent influences the supply of land and hence enters into cost of production and price.

By her second argument Mrs. Hollond seems to imply that although by the dosing process a surplus may be obtained from the other factors of production, there is no good and sufficient reason for regarding them as fixed in amount as it can be done in the case of land. To this it may be replied that the supply of land in regard to any particular crop is not fixed in amount. Then, in the case of any manufacturing industry in which the area of land used is very small and the expenditure on plants and machinery very heavy, there is as much reason to think that land is adjusted to capital as to suppose that capital is adjusted to land. But the advocates of the Ricardian theory never admit that in such an industry rent is not a surplus, and that it is a part of the cost of production.

It may not be superfluous to add here that the absence of the rent element in marginal cost is not of any great importance. Whenever any factor of production is kept constant, and the other factors are applied to it in successive doses until the margin of profitableness is reached, the marginal cost of production will not contain any element of the expenses for the use of the constant factor. It should not be said for this reason that the remuneration to the constant factor is no part of the cost of production and does not therefore influence price.

In the Indian Journal of Economics, October 1930, Mr. Das-Gupta says that rent enters into price in the short period, but does not do so in the long.<sup>20</sup> His argument is that in the short period, there takes place a shifting of land from one use to another,

<sup>20</sup> Article on "Land Rent in Relation to the Pricing Process."

whereas in the long period, owing to a perfect adjustment of land to different uses, this shifting does not occur. This view does not seem to be justified by a proper conception of long and short periods. In the short period even the income from fixed capital does not enter into the cost of production and price. The Marshallian doctrine of quasi-rent is based on this fact. A shifting of land from one use to another cannot take place in the short period; it really takes place in the long. Mr. Das Gupta says that in the long period, there is a perfect adjustment and hence no shifting of land. But, as a matter of fact, if there is no shifting in the long period, there cannot be a perfect adjustment, when the conditions of demand and supply require that an adjustment should be made. It is through the shifting of land from one use to another that perfect adjustment is attained. In the short period a perfect adjustment is not possible because there is no time for such a shifting. Thus rent affects price in the long and not in the short period.

# SOME REMARKS ON VALUE AND COST, WITH SPECIAL REFERENCE TO THEIR RELATION TO RENT

BY

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1. Ricardo's theory of rent and price has been a subject of much debate in recent times. The theory enunciated by Ricardo is that rent is a surplus and does not enter into the price of commodities.<sup>1</sup> The rival theory advanced first by Jevons and later on taken up by many American economists is that rent affects price in the same way as wages and interest do. Jevons calls attention to the existence of alternative uses of land and suggests that the possibility of lands being turned to alternative purposes compels farmers to pay rent for the use of land, just as the possibility of labour being transferred to alternative employments compels producers to pay wages. It is the purpose of the present paper to examine the two theories and to elucidate certain principles involved therein which are of far-reaching importance from the point of view of the whole theory of value.

2. The classical economic thinkers looked at the problem of value and cost from a metaphysical point of view. Their primary objective was to study value as a relation between commodities, and by cost they used to mean real cost, i.e., pain or disutility. It is this metaphysical analysis that lies behind the much criticised labour-cost theory of value. Rent, according to them, cannot have any place in the labour cost which regulates value, for

<sup>1</sup> "That corn which is produced by the greatest quantity of labour is the regulator of the price of corn; and rent does not and cannot enter in the least degree as a component part of its price."—*Principles of Political Economy and Taxation*, Third Edition, p. 67.

land being nature's gift involves no exertion of mind or body of man, nor does it involve any positive sacrifice.

It is interesting to note that Adam Smith subscribes to both the view-points and here is therefore a case illustrating the opinion expressed by many writers that the germ of every theory of value lies in the *Wealth of Nations*. In his chapter on Real and Nominal Price he takes labour alone as "the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared."<sup>2</sup> He suggests, therefore, that "the real price of everything. . . is the toil and trouble of acquiring it."<sup>3</sup> Again, in the chapter on Rent we find him declaring that "rent . . . enters into the composition of the price of commodities in a different way from wages and profit. High or low wages and profit are the cause of high or low price; high or low rent is the effect of it."<sup>4</sup> . . .

On the other hand, in the chapter on Component Parts of Price he takes rent as one of the component parts of price. "As soon as the land of any country has all become private property, the landlords, like all other men, love to reap where they never sowed and demand a rent even for its natural produce"<sup>5</sup>; so that "in the price of the greater part of commodities the rent of land comes . . . to constitute the third source of value."<sup>6</sup> Then again, in his chapter on Natural and Market Price he says, "the natural price itself varies with the natural rate of each of its component

<sup>2</sup> *Wealth of Nations*, Economic Classics Series, Edited by W. J. Ashley, p. 34.

<sup>3</sup> *Ibid.*, p. 30.

<sup>4</sup> *Ibid.*, p. 130. Here he anticipates Ricardo's dictum, "Corn is not high because a rent is paid but a rent is paid because corn is high."

<sup>5</sup> *Ibid.*, p. 45. Mark the fling at the leisure class who "love to reap where they never sowed."

<sup>6</sup> *Ibid.*, p. 46.

parts, wages, profit and rent,"<sup>7</sup>—thus placing rent in the same category with wages and profit.

These statements about the relation of rent to price, though apparently contradictory, only show that Adam Smith looks at the problem from different points of view on different occasions. When he says that rent forms a component part of price he abandons the metaphysical analysis and comes down to empiricism, that is to say, he studies the problem from the point of view of an entrepreneur in an improved society, where all lands have been 'appropriated.' This is clear in a passage in his chapter on Component Parts of Price which runs thus: "a third circumstance must be taken into consideration, the rent of land, and the commodity must commonly purchase, command or exchange for, an additional quantity of labour, in order to enable *the person who brings it to market* to pay this rent."<sup>8</sup>

Ricardo, an adherent of what Von Wieser calls the 'philosophical account' of the theory of value, has an uncompromising objection to taking rent as a part of cost, even when regard is had to the 'appropriation of land' in the 'improved society.' He marks a significant departure from the older concept of rent as arising from the 'bounty of nature' by pointing to the fact that rent arises from the 'niggardliness of nature.' "The labour of nature is paid not because she does much, but because she does little. In proportion as she becomes niggardly in her gifts, she exacts a greater price for her work."<sup>9</sup> In Ricardo's opinion, therefore, "Adam Smith . . . cannot be correct in supposing that the original rule which regulated the exchangeable value of commodities, namely, the comparative quantities of labour by which they were produced, can be at all altered by the appropriation of

<sup>7</sup> *Ibid.*, p. 64.

<sup>8</sup> *Ibid.*, p. 46. Italics in this and in almost all the following passages are mine.

<sup>9</sup> The Principles of Political Economy and Taxation, Economic Classics Series, Edited by W. J. Ashley, p. 61.

land and the payment of rent.'<sup>10</sup> Adam Smith does not really differ from Ricardo in his idea about the nature of rent as a surplus, for he says that if the ordinary price of the produce of land is more than sufficient to 'replace the stock which must be employed' in bringing it to the market, 'together with its ordinary profits,' then 'the surplus part of it will naturally go to the rent of land'; and 'if it is not more, though the commodity can be brought to market, it can afford no rent to the landlord.' But according to Adam Smith every land produces such a surplus,—even 'the most desert moors in Norway and Scotland' do. Ricardo says, no. He thinks that in every country 'from the rudest to the most refined' there is such a land as affords no such surplus and he cites the case of America. Speaking of Great Britain where no such lands existed at his time, he observes that his theory does not fall through "if there be any capital employed . . . on land which yields only the return of stock with its ordinary profits, whether it be employed on old or on new land;<sup>11</sup>—thus referring to what is known today as the intensive margin. So while defining a unit of real cost he excludes rent from it and

<sup>10</sup> For once Ricardo seems to have made a slip, and that is when, in the course of his criticism of Malthus' opinions on rent, he suggested that 'rent is a creation of value.' "If the price of corn, from the difficulty of producing any portion of it, should rise from 41 to 51 per quarter, a million of quarters will be of the value of 5,000,000 *l* instead of 4,000,000 *l*, and as this corn will exchange not only for more money, but for more of every other commodity, the possessors will have a greater amount of value, and as no one else will, in consequence, have a less, the society altogether will be possessed of greater value, and in that sense rent is a creation of value."—Ricardo's Works, McCulloch, p. 244.

This passage is open to two objections. In the first place, the rise in the value of corn, in the example given, is due to the 'difficulty of producing' corn, and not due to rent. In fact, both value and rent here are co-effects of cost. In the second place, Ricardo seems to have missed the point that as value refers to exchange value, an addition to social value is meaningless.

<sup>11</sup> Ricardo's Works, McCulloch, pp. 197-98.

suggests that "it is the comparative quantities of commodities which labour will produce that determine their present or past relative value."<sup>12</sup>

3. Jevons and the Austrians look at the problem of cost from an entirely different angle. To them 'cost' is not an expression of anything real and absolute; on the contrary, it implies a comparison of what is with what might be, and thus expresses the actual in terms of the potential. The idea of cost, according to them, presupposes the existence of alternative uses. Thus the cost of labour in a particular occupation is not the absolute measure of the labourers' 'toil and trouble' in that occupation, but it stands for the amount of utility that is surrendered on account of their being tied up in that particular occupation at the expense of other alternative occupations. Similarly, land in so far as it is capable of being used for alternative purposes involves cost in any particular use, and this cost is measured by the amount of service which it might have rendered in other alternative directions. It is only when a particular factor admits of a single use that it cannot be regarded in their sense as involving cost. The factors which do not admit of alternative uses are called 'monopoly goods' as distinct from 'cost goods.'<sup>13</sup> Von Wieser thus suggests that Ricardo's proposition that rent does not enter into costs holds good when land admits of a single use, but loses its applicability as the uses of land multiply.<sup>14</sup>

Thus cost, according to them, represents not positive disutility but a negation of utility. Such a concept of cost is fruitful indeed for an analysis of the psychological phenomena making for any equilibrium when the conditions for the equilibrium are given; because when those conditions are stationary and the resources are limited equilibrium is conceived as the resultant of a

<sup>12</sup> The Principles of Political Economy and Taxation, Economic Classics Series, Edited by W. J. Ashley, p. 8.

<sup>13</sup> See Von Wieser's Natural Value, p. 175.

<sup>14</sup> *Ibid.*, p. 209.

process of apportionment of the resources among alternative uses through which the returns from equal amounts of resources are equal in all the directions. But this negative interpretation of cost, though fruitful for this purpose, cannot be said to be essential; for, the rival method of approach also gives the correct explanation of equilibrium. The Austrians would say that in equilibrium the total utility is maximum; but we might as well view it from the opposite angle and say that the distribution of resources between different uses leads in equilibrium to the total disutility being minimum. Besides, the Austrian concept of cost loses its importance as a scientific instrument when we extend the application of the principle of cost to the problem of international values, or when we take account of non-competing groups in relation to the general theory of value. Apart from this, as will be seen presently, the classical conception of equilibrium is such that the conditions of the supply of productive factors are not assumed to be stationary; and this difference in the attitude towards equilibrium is highly significant from the point of view of the relation between rent and cost. Equilibrium, according to the classical economists, is the resultant of a balance between the forces of demand and supply,—of utility and disutility. Cost is thus regarded as representing positive disutility,—to be set off against the opposite force, utility.

4. Alfred Marshall keeps intact the essence of Ricardo's theory. But he makes a departure from the latter's point of view in holding that real costs refer to forces which are for the most part quantitatively unmeasurable, and for measuring cost he makes use of money without, however, vitiating the conception of cost. In fact, he studies the problem of value and cost against a metaphysical background. His ultimate concern is with real cost, though the immediate concern is money cost. In defining real cost he, like his 'hero,' excludes rent from it. "The exertions of all the different kinds of labour that are directly or indirectly involved in making it; together with the abstinences or



rather the waitings required for saving the capital used in making it; all these efforts and sacrifices together will be called the real cost of production of the commodity."<sup>15</sup> Thus no room is left in it for rent. The situation remains unaltered even when money is introduced; for, it is the "sums of money that have to be paid for these efforts and sacrifices" that are to be called "its money cost of production." Then he goes on to suggest that we refer to money cost when we consider costs from the point of view of the entrepreneur, but from the point of view of society real cost is more significant, though in domestic trade, under certain circumstances, "the money measure of cost corresponds to the real costs." In his opinion real costs, though quantitatively unmeasurable, are qualitatively important in our enquiry from the social point of view as to "whether the cost of attaining a given result is increasing or diminishing with changing economic conditions," or in other words, in our investigation into the operation of the laws of returns. Marshall thus introduces money into problems of value and cost simply for the sake of convenience, for fixing upon a unit of measurement. Cost as well as utility relates to 'states of consciousness' and money serves as a convenient, though rough, unit of measurement of these mental states. Economic motives are so diverse in nature and influence different persons in so diverse a manner that economists cannot claim to measure them directly. A person's economic motives are, therefore, measured through their outward manifestations. As Marshall observes, "the force of a person's motives—not the motives themselves—can be approximately measured by the sum of money, which he will just give up in order to secure a desired satisfaction; or again by the sum which is just required to induce him to undergo a certain fatigue."<sup>16</sup> But the veil of money must not keep the economist blind to the real economic forces. In examining the 'welfare' of the people he must take away the veil and study

<sup>15</sup> Principles of Economics, Seventh Edition, p. 339.

<sup>16</sup> Principles of Economics, Seventh Edition, p. 15.

the working of the real forces underneath,—the sum total of utility and disutility arising out of social, psychological as well as physical reactions. The real cost of a labourer,—the cost that affects the supply of labour,—does not depend on money wages but on certain other things, viz., the atmosphere of the locality, the nature of work, the social position which the occupation involves and so on. What Marshall calls 'the net advantages of the occupation' have to be calculated by "deducting the money value of all its disadvantages from that of all its advantages."<sup>17</sup> Thus equal money wages do not always represent equal real wages.

5. As against this quasi-subjective interpretation of economic phenomena given by Marshall Prof. Cassel puts forward an entirely objective interpretation. He points out certain limitations of the value concept and constructs a theory of price which is independent of the theory of value and which is therefore stripped of the 'metaphysical odor.'<sup>18</sup> In his system of social economy Prof. Cassel takes cost in a 'purely objective way,' and places rent on the same footing with other forms of income so far as their relation with cost is concerned. These different forms of income—the prices of the factors of production—are, according to him, results of the 'pricing process' as much as the price of the product is, and there is an inter-relation between the two groups of prices,—both being "simultaneously determined by the independent factors of the pricing process."<sup>19</sup> He accuses Marshall of a one-sidedness in his idea of 'reciprocal dependence'; for, Marshall looks upon rent as a purely dependent variable,—as something which is 'price-determined' and not 'price-determining.'

This is not to discuss whether we should treat the theory of value as antecedent to the theory of price or we should discard the former altogether and take an entirely pragmatic view of eco-

<sup>17</sup> *Ibid.*, p. 73.

<sup>18</sup> Cf. also Allyn Young's *Economic Problems, New and Old*, Chapter X.

<sup>19</sup> *The Theory of Social Economy*, p. 270.

conomic phenomena. It may, however, be observed in passing that the subjective concept of value and cost is more fundamental, and the so-called Price Economics gives a less searching treatment of the problem of value. And it must also be granted that so long as we take cost in the classical and Marshallian sense as representing a personal exertion or sacrifice, it does not include rent which, by definition, is an income from a nature's gift the supply of which involves no 'effort' or 'sacrifice.' In value Economics, therefore, land forms a category by itself. The value that is attached to it is governed by demand and scarcity and is therefore to be regarded as a surplus. In the following sections it will be examined if the introduction of money necessitates a revision of Ricardo's theory of rent and cost.

6. As has been already noted Marshall excludes rent from money cost of production also. For instance, in constructing the supply schedule of woollen cloth he reckons,

- ' (i) the price of wool, coal and other materials which would be used up in making it ' ;
- ' (ii) wear-and-tear and depreciation of the buildings, machinery and other fixed capital ' ;
- ' (iii) interest and insurance on all the capital ' ;
- ' (iv) the wages of those who work in the factories ' ; and,
- ' (v) the gross earnings of management (including insurance against loss), of those who undertake the risks, who engineer and superintend the working.'<sup>39</sup>

But he leaves out of account the rent of land. According to Marshall, the rent of land enters into cost only from the point of view of an individual producer; for, as he says, "land is but one form of capital to the individual producer." But from the point of view of society "land in an old country is approximately (and in some cases absolutely) a permanent and fixed stock." If,

<sup>39</sup> Principles of Economics, Seventh Edition, p. 343.

therefore, we concentrate our attention to a 'single use' of land,—to "corn" in the sense in which it was used by the classical economists as standing for all agricultural produce, rent must be conceived as a surplus depending on the position of the margin. Further, no new principle emerges when we turn our attention to the competing uses of land. To the question put by Jevons as to whether "if land which has been yielding £2 per acre rent as pasture be ploughed up and used for raising wheat" the £2 per acre should not be "debited against the expenses of production of wheat." Marshall gives his answer in the negative, for, as he says, "there is no connection between this particular sum of £2 and the expenses of production of that wheat which only just pays its way."<sup>21</sup> Here Marshall speaks of equilibrium conditions. "In equilibrium, oats and hops and every other crop will yield the same net return to that outlay of capital and labour, which the cultivator is only just induced to apply."<sup>22</sup> Again, referring to the use of urban land he says, "the competition of land for various uses will cause building in each locality and for each use to be carried up to that margin, at which it is no longer profitable to apply any more of capital to the same site."<sup>23</sup> On the whole, the distribution of lands between different purposes is so adjusted in equilibrium conditions, that no profitable transference from one use to another is possible, all lands being used for the different purposes up to 'the margin of profitableness.'

Thus viewed, the problem of the relation of rent to price resolves itself into the simple problem as to whether rent is or is not a surplus. In the short period of imperfect adjustment of the distribution of lands for different uses, the marginal land for any crop bears rent, so that an abolition of rent affects the marginal cost of production and hence the supply price of that crop. If, for example, a particular piece of land can produce both jute

<sup>21</sup> *Ibid.*, p. 437.

<sup>22</sup> *Ibid.*, p. 435.

<sup>23</sup> *Ibid.*, p. 449.

and rice at Rs. 5 and Rs. 4 per maund respectively and if the marginal cost of production of jute is Rs.  $4\frac{1}{2}$  per maund and that of rice is Rs. 5 per maund, then this land will be cultivated for rice and will yield rent. If, then, the demand for jute rises so much that this land has to be drawn away to jute cultivation it becomes marginal in relation to jute. But still the cultivator who applies this land to jute has got to pay a rent at least equal to that which it used to yield under rice. On the other hand, it may be that the cultivator of rice has to pay a certain amount of rent for the use of the marginal rice land just to retain it for rice, and that amount is at least equal to what the jute cultivators would be willing to pay for its use. These rents form a part of the marginal cost and enter into the short-period supply price of the crops. Rent in such circumstances is not purely a surplus. But in equilibrium conditions when the marginal returns from every use to which lands may be applied are equal, rent must be conceived as a surplus and a remission of rent or a tax on rent cannot be said to affect the marginal cost of production, nor, therefore, the price of any individual crop. In the example just given a rent is borne at the margin so long as the lands are not cultivated up to the margin of profitability, and during that process of adjustment as a result of which the cultivation of every land both for jute and rice is carried up to that margin, there are transferences and retransferences of lands from one use to the other. Throughout that process, therefore, a remission of rent may affect the marginal cost of any of these crops or both; but when that process is over, when a perfect adjustment takes place, the marginal cost of any of the crops contains no rent. In other words, when for example, an agricultural industry is out of equilibrium, there is an element of rent in the marginal cost of the commodity in question, but when it is in equilibrium the marginal cost contains no rent. It must be noted that though, when an agricultural industry is out of equilibrium, rent exists at the margin so that a remission of rent affects the marginal cost yet it does not alter in

any way the position of equilibrium that the industry would take. Thus it is important that a confusion between the process towards equilibrium and the position of equilibrium should be guarded against. In the process towards equilibrium economic frictions present themselves which disappear when a position of static equilibrium is secured, and it is at such a position of equilibrium that the marginal returns from different uses are equal. Let us refer to Marshall's illustration of a meteoric shower of stones harder than diamonds. If the stones cannot be worn out or destroyed, and no more can be found they are analogous to land or more properly "the original and indestructible powers of the soil," and their income is analogous to rent. In this extreme case these stones are distributed in the long period among the various uses to which they may be applied in such a way that the value of the marginal returns from every use is the same, that is to say, "there is no use to which an increased supply of them could be applied without taking them away from some other use in which they were rendering net services at least as valuable."<sup>24</sup> Consequently, a "uniform tax on them, collected from the user, will lower their net service in each use by the same amount; it will not affect their distribution between several uses; and it will fall wholly on the owner, after perhaps some little delay caused by a frictional resistance to readjustments."<sup>25</sup> In such a long-period adjustment the 'margin of transference' is evidently ineffective in the determination of price. Of course, when an agricultural industry moves from one equilibrium position to another, there is a redistribution of lands between the various uses, and the shifting that is thereby occasioned takes place to a large extent through the 'margin of transference'; and it may appear that the rent yielded by these lands on the margin of transference affects the price of the individual crops through its effect on the supply of lands, and for the matter of that, on the supply of the

<sup>24</sup> *Ibid.*, p. 418.

<sup>25</sup> *Ibid.*, p. 418.

crops. If, for example, an increase in the demand for jute leads to a transference (through the margin of transference) of some lands from rice to the cultivation of jute, the rent from jute lands as well as the price of jute increases, and one may be led to think that the increase in the rent is the cause of the rise in the price of jute. But as a matter of fact, it only shows that the increase of rent and the rise in the price of jute are the co-effects of the same cause—an increase in the demand for jute. Here the factor which is responsible for the alteration in the position of equilibrium is responsible also for bringing about an increase both in the rent and in the price. It ought not to be overlooked, however, that this transference of some rice lands to jute has its reaction on the price of rice, and in the altered position of equilibrium also the distribution of lands comes to be such that the value of the marginal returns of rice and jute becomes equal, cultivation being pushed in both the directions up to the margin of profitability.

7. We find, therefore, that the whole problem of the relation between rent and price turns on the question of the period of time to which we refer. It is, therefore, important to examine in this connection the real significance of a short period and a long period as applied in economic literature. The author of the terms—Alfred Marshall—defines a short period as a period in which “the supply of specialised skill and ability, of suitable machinery and other material capital, and of the appropriate industrial organisation has not time to be fully adapted to demand”; and a long period, he says, is a period in which “all investments of capital and effort in providing the material plant and the organisation of a business, and in acquiring trade knowledge and specialised ability, have time to be adjusted to the incomes which are expected to be earned by them.”<sup>26</sup> When we refer to a short period we assume an imperfect adjustment of economic factors, so that value does not exactly conform to the ‘total cost’; on the

<sup>26</sup> *Ibid.*, pp. 376-77.

other hand, when we refer to a long period, we assume a most appropriate adjustment of economic factors, so that value corresponds to the 'total cost.' In neither case do we refer to any definite period of time; we refer, on the other hand, to the degree of adjustment of economic factors. In actual life we are familiar with short-period phenomena,—with 'business cycles,'—and not with long-period 'equilibria.' A perfect long period, as Marshall points out, "must give time enough to enable not only the factors of production of the commodity to be adjusted to the demand, but also the factors of production of those factors of production and so on"<sup>27</sup>; and this involves the assumption of a 'stationary state.' Unhappily, however, economic frictions become larger and more intense, 'other things' become more variable as the period becomes long. The concept of a long-period equilibrium is, therefore, an abstract one, though it has its importance in so far as it enables us to fix our eyes on a 'norm' round which economic phenomena move. In regard to the short period, the assumption is that the supply of all factors cannot keep pace with the demand, that is to say, they are not perfectly elastic, and, therefore, are not appropriately utilized. Elasticity refers to movements in both the directions. In the short period, therefore, the supply of some factors cannot be adequately increased when there is an increase of demand, and, on the other hand, some factors remain under-employed when there is a fall in demand, for, the time allowed is insufficient for the supply to be adequately reduced by gradual decay or by transference to other uses. Thus over-production is as much a phenomenon of the short period as under-production. The cost due to those factors whose supply is elastic in relation to a particular period is called 'prime cost' with reference to that period, and the cost due to those factors whose supply is inelastic is called 'supplementary cost' for that period. The incomes from those factors other than land whose supply remains inelastic, and

<sup>27</sup> *Ibid.*, p. 379 n.



which therefore constitute the supplementary cost fall under 'quasi-rent.' "The supplementary costs, which the owner of a factory expects to be able to add to the prime costs of its products, are the sources of the quasi-rents which it will yield to him."<sup>28</sup> As the supply of those factors (other than land) which form the supplementary cost becomes elastic in the long period, the distinction between 'prime cost' and 'supplementary cost,' as also the distinction between 'interest' and 'quasi-rent' fades away; in other words, what is regarded as 'supplementary cost' in the short period becomes 'prime cost' in the long period and similarly, what is regarded as 'quasi-rent' in the short period becomes 'interest' in the long period. "There is no sharp line of division between floating capital and that which has been 'sunk' for a special branch of production, nor between new and old investments of capital; each group shades into the other gradually."<sup>29</sup> The distinction between 'circulating' and 'fixed' capital rests, as a matter of fact, upon the time for which these different capitals endure. As Ricardo says, "according as capital is rapidly perishable and requires to be frequently reproduced, or is of slow consumption, it is classed under the heads of circulating or of fixed capital,"—a division "in which the line of demarcation cannot be accurately drawn."<sup>30</sup> The period in relation to which a steam engine will be regarded as 'fixed' capital, and which therefore will be taken as a short period for a steam engine, may be long period for, say, a ship; and what is short period in relation to ships will be long period in relation to the clothing of labourers, and so on. But in a perfect long period, as has been just noted, the supply of all reproducible factors must be elastic. It follows, therefore, that, as between 'short period' and 'long period' also no sharp line of demarca-

<sup>28</sup> Principles of Economics, Marshall, Seventh Edition, p. 362 n.

<sup>29</sup> *Ibid.*, p. 412.

<sup>30</sup> The Principles of Political Economy and Taxation, Economic Classics Series, p. 19, and the footnote on that page.

tion can be drawn; one shades into the other imperceptibly. In the short period the supply of land from the point of view of an individual use is variable. Land in such a case is one form of capital and its income which is analogous to interest influences the short-period normal price. But when as a result of the shifting of lands from use to use the long-period statical equilibrium is secured, and the distribution of lands becomes appropriate,—the value of the marginal returns in every use being the same,—the supply of land from the standpoint of individual uses must be taken to be fixed in view of the fixedness in its total supply. Now, the quantity of land being fixed, the intensive working of land gives rise to diminishing returns until in the long run a margin is reached at which the return just remunerates the labour and capital applied and nothing is left for the landowner. This margin is the basis on which the surplus to be paid as rent is measured.

8. There are some economists who would not treat land differently from other agents. They point out that the intensive working of labour or of capital also gives rise to diminishing returns so that at the margin nothing like wages or interest exists,—in other words,—that there is a no-interest margin for capital and a no-wage margin for labour just as there is a no-rent margin for land. Prof. Ogilvie, for example, taking the cue from Prof. Cassel, suggests that “a one-man tobacconist,” if he “doses himself with borrowed capital,” will find that at the margin “his additional receipts only just cover the additional interest which he has to pay,” or “a milliner” dosing “capital of her shop with the labour of assistants” will find that “her additional receipts only just cover her additional wages-bill.”<sup>31</sup> He maintains, therefore, that “by simple arithmetic rent can be made a surplus in receipts over capital-and-labour expenses just as wages could be made a surplus in receipts over capital-and-

<sup>31</sup> *Economic Journal*, March 1930, p. 6.

land expenses,"<sup>32</sup> or,—he might add,—as interest could be made a surplus in receipts over labour-and-land expenses. In fact, Prof. Cassel puts forward a similar argument against the Ricardian thesis that rent does not enter into cost and points out that one might with equal justice draw up another thesis to the effect that "the price of the product depends entirely upon the cost of the marginal land, and that consequently, the cost of capital and labour is not an element of the cost of production."<sup>33</sup> As against the contention of the classical economists that from the standpoint of 'a whole national economy' the supply of land is fixed whereas the use of capital and labour on land is variable, Prof. Cassel argues that "when we look at the exchange economy in its entirety, the available quantities of command of capital and labour, as well as land, must be given at any particular moment." The assumption that in a self-contained country the quantity of land is relatively fixed while the quantities of labour and capital are the more variable elements, relates, according to him, to "the historico-dynamical treatment of the development of prices." Prof. Cassel obviously adopts the Clarkian concept of a stationary equilibrium in which the factors of production are assumed to be fixed. In the analysis of cost, "the scarcity of the relevant means of production" is, according to him, the only

<sup>32</sup> *Ibid.*, p. 21.

<sup>33</sup> *The Theory of Social Economy*, Vol. I, pp. 271-72. This idea was developed simultaneously by Hobson and Clark as early as 1891. See *The Quarterly Journal of Economics*, April 1891. Hobson on 'The Law of the Three Rents,' and Clark on 'Distribution as Determined by a Law of Rent.' Hobson reduces the whole theory of distribution into one simple theory of rent. "The rent of a piece of

$\left\{ \begin{array}{l} \text{land} \\ \text{capital} \\ \text{labor} \end{array} \right\}$  is the excess of its produce over that of the

$\left\{ \begin{array}{l} \text{land} \\ \text{capital} \\ \text{labor} \end{array} \right\}$  which is employed to the least advantage and

which pays no rent" (p. 269). Cf. also "*The Economics of Distribution*," pp. 133-36. Clark also enunciates the same principle in the course of the paper referred to. Cf. also '*The Distribution of Wealth*,' Chap. XII.

essential requisite.<sup>34</sup> "The price," he says, "need only be based upon this scarcity, and is by no means necessarily conceived as a condition of the supply of the relevant means of production." So far as it goes, there is, of course, no basis for a differentiation between land and other agents or for the matter of that between rent and the prices of other factors. But such a conception of stationary equilibrium is fruitful in relation to very short periods. 'At any particular moment' the available quantities of capital and labour are given, just as the quantity of land is. But such a concept loses its importance when we refer to 'subtle' problems of the 'long-period,'—the period which is, in fact, relevant for a study of the relation between cost and value, for it is in the long period that value corresponds to cost. It seems rather strange that Prof. Cassel who believes in the cost theory of normal value should subscribe to the Clarkian concept of stationary equilibrium. According to Prof. Cassel, "the unit price of the product must naturally, in a state of equilibrium, be equal to the total cost per unit of the product,"—this 'total cost' including "both the cost of capital and labour and the ground-rent."<sup>35</sup> Does not this 'state of

<sup>34</sup> The requisite conditions of a stationary Economy as enumerated by him, are: "(1) The existence of land and natural materials in certain quantities, (2) the existence of a certain real capital, (3) such management of the process of production that the real capital should remain constant, (4) a certain annual amount of work done." (*The Theory of Social Economy*, p. 34.) Such is also the Clarkian hypothesis of a stationary equilibrium, and it is such a hypothesis which has led Johnson to take any variation of labour and capital as a phenomenon connected with economic dynamics and to conclude therefrom that such portions of the supply as do not contain rent "appear only when dynamic change takes place,"—a proposition which betrays a misapprehension of Marshall's 'statical assumption and which is misleading in so far as a no-rent intensive margin appears, as has been abundantly shown, under static conditions and not under dynamic conditions. See A. S. Johnson's 'Rent in Modern Economic Theory,' Chap. V.

<sup>35</sup> *The Theory of Social Economy*, Vol. I, pp. 269—307.

equilibrium' relate to the long period? That being so, how is it that Prof. Cassel takes capital and labour as invariable? Clark himself was quite consistent because the whole theory of distribution enunciated by him was adapted to his peculiar hypothesis. The other economists who upheld the utility theory of value and the productivity theory of distribution cannot also be accused of inconsistency; for, evidently their hypothesis relates to a very short period.<sup>36</sup> The hypothesis in Marshall's 'statical method' is different.<sup>37</sup> He fixes his mind on some central point where the economic forces have come to rest; but the variability of those forces is recognised. The forces themselves tend to

<sup>36</sup> Their conception of equilibrium also, as has been seen above, is based on certain given conditions under which the supply of economic factors is fixed, and this, therefore, relates to a very short period. But we must not lose sight of the fact that very short periods preclude the possibility of such an adjustment as would bring about an equalisation of marginal returns in all directions.

<sup>37</sup> See a very interesting discussion on 'the ambiguity in the conception of stationary equilibrium' by Prof. L. Robbins. (*Economic Journal*, June 1930.) In the course of his paper Prof. Robbins points out the two different interpretations put upon stationary equilibrium by Clark on the one hand and Marshall and the classical economists on the other. The classical conception which has been followed by Marshall is one "in which the condition of stationariness is the resultant of the balancing of forces tending to change," and the Clarkian conception is one "in which the factors of production are stationary by hypothesis," equilibrium being attained within these conditions. (Pp. 206-07. See also F. H. Knight: *Risk, Uncertainty and Profit*, p. 125n, pp. 142-43 n.) It may be noted here that Prof. Knight takes the question of long-period normal value and that of short-period distribution as aspects of the same problem in which the supply of 'productive agencies' is fixed while that of consumption goods is variable, being a function of price. In Marshall's analysis of long-period normal value, on the other hand, the supply of reproducible productive agencies is not taken as fixed. As has been explained above Marshall's 'short period' also is one in which the supply of certain factors is variable. It is therefore, rather misleading to put the long-period value problem and the short-period distribution problem in the same division, as does Prof. Knight.

change, but equilibrium is reached as a result of a balance between those forces.<sup>38</sup> Marshall's concept, therefore, does not rule out the possibility of variations of labour and capital. But land being nature's gift is a constant quantity. Under conditions of such a statical equilibrium, the income from labour and capital affects their supply, while the income from land does not affect its supply. "There is " as Marshall says, "likeness amid unlikeness between true rent and quasi-rent."<sup>39</sup> A tax on rent leaves the supply of land in tact, and as such does not affect the position of equilibrium. But the supply of labour and capital is potentially elastic at the point of equilibrium. Hence a tax on wages and/or interest leads to an absolute reduction in the supply of labour and/or capital, and it is, therefore, a sufficient cause of an alteration in the position of economic equilibrium, and a reduction of National Dividend. This is the 'subtle truth' in Ricardo's proposition that rent does not enter into price,—a truth the recognition of which is of "the highest importance scientifically and in relation to the practical well-being of the world."

P. S.—Since the above was written I find in the October (1931) number of the 'Indian Journal of Economics' an article entitled Land Rent and Prices in which Mr. Buchanan, the author of the article, makes certain comments on my views on the relation of Rent to Price which had been embodied in an article under the title Land Rent in Relation to the Pricing Process (Indian Journal of Economics, October 1930). Some of the points raised by Mr. Buchanan have received attention in the foregoing pages. There are, however, others which require to be explained. I shall take the minor points first:

Mr. Buchanan objects to my using the old phraseology 'enters into price.' In the main body of the paper I have discussed the problem of 'reciprocal dependence.' I have the authority of

<sup>38</sup> See Marshall, Principles of Economics, Seventh Edition, p. 369.

<sup>39</sup> *Ibid.*, p. 431.

Marshall whom Mr. Buchanan quotes when I say that the relation of wages and interest to price is one of reciprocal dependence, but the relation of rent to price is not so. The problem is whether rent is a constituent element of cost which influences price. It is not.

So far as the term 'corn' is concerned, I used it deliberately, just to indicate the nature of the tax. I referred to a general tax on rent, not to a special tax on rent appertaining to a particular crop. A tax on rent on Maize lands, for example, affects not only the price of Maize, but of other commodities, too. The price of maize rises, and the price of other commodities towards whose production the lands relieved from Maize turn falls. But that is a different story. The essential point of difference between land and other agents such as capital and labour is that a general tax on wages and/or interest affects the supply of labour and/or capital, but a general tax on rent does not affect the supply of land.

Then come the two more important issues: In the first place, Mr. Buchanan is not convinced that Ricardo dealt with a long period and Jevons with a short period. Secondly, he suggests that the period of time makes no difference so far as the relation between rent and the supply of lands is concerned.

In regard to the second point I need hardly add anything to what I have said in the main body of the present paper. The difference between myself and Mr. Buchanan arises from the fact that while I take a long-period equilibrium to refer to a position or rather a point, Mr. Buchanan takes it to refer to a process.

So far as the second point is concerned, it is so important that justice cannot be done to it in this short note. I keep it to be done, if possible, in a separate paper. I need only say here that I still maintain that in their analysis of value and equilibrium Jevons referred to a short period and Ricardo to a long period. Though, as Mr. Buchanan points out, neither of them is specific on the matter, yet it can be deduced from their respective hypo-

theses. I have shown how Jevons' hypothesis relates to a short period. As regards Ricardo, although his ruling interest, as Cannan suggests, was practical, and "we are indebted . . . to the Corn Law controversy of 1813—15 for the Ricardian theory of rent," yet it does not follow that Ricardo's theories relate to a short period. Cannan does not say that. In the pages of his *Theories of Production and Distribution* to which Mr. Buchanan refers there are certain remarks which lend support to my contention. While suggesting that "Ricardo's ruling interest was no less practical than that of Malthus" he adds in a footnote that "this is not in contradiction with Ricardo's remark to Malthus, 'if I am too theoretical . . . you, I think, are too practical.'" Then he goes on to say, "had Ricardo foreseen some of the discussions which took place after his death, he would have said, 'if I use the deductive method too exclusively, you, I think, rely too much on the inductive.' " In fact his theories might be meant for the solution of 'immediate, practical and often really short-run problems,' but they themselves are long-run and abstract.



## NOTES

### THE TOLL OF THE DEPRESSION

The suicide of M. Kreugar, the match king, throws into lurid relief the distress resulting from the present terrible depression. The *London Times* made the following remark on this event: 'It is clear that he was the victim, not so much of faults in the huge system which he had built up within a brief twenty years, as of the world conditions simultaneously affecting and afflicting every industrialist and every financier of greater or lesser degree.' There is something very faulty about the system of world economy which engulfs in moral and financial ruin leading to suicide geniuses of the highest order who are no common adventurers but persons gifted with a remarkable capacity for organisation and enterprise. The reason for the landslide in confidence is to be found in the unprecedentedly heavy fall of gold prices during the last two years. It speaks very ill of the system of world organisation which drives to despair persons who are great organisers of triumph in the industrial and financial spheres. The worst of the present depression is that those who have been ruined by it are, apart from speculators who deserve their fate, those who had faith in economic progress and who laboriously and strenuously applied themselves to the building up and expansion of industrial enterprises of various kinds. Thus those who had put their savings in the form of goods have been terribly cut up and the mere hoarders of gold or currency have been beneficially affected. Attention has been diverted from the true operative causes of the present depression by the stress laid on overproduction. The analysis that tries to find the main explanation in overproduction is faulty. Since the industrial revolution there have been many periods marked by intense productive activity and the last few years have not witnessed any exceptionally striking outburst of it. The root cause of the unfortunate condition into which world economy has been thrown may be traced to the jealousies and shortsightedness of

the politicians who govern the destinies of great nations. The responsibility that rests on economists in different countries lies in the direction of their undoubted obligation in the matter of spreading a knowledge of the true conditions of domestic and international prosperity. Plato spoke of the philosopher king; we may in the present age well call for the economist statesman.

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### THE NEW MERCANTILISM

Students of economics during the last two years have been rudely shaken by the almost mystic value that has come to be recently attached to gold. We have been under the impression that such unscientific reasoning had once for all been laid to rest. Recent events have, however, belied our trust. It only shows that scientific thought should continuously be on its guard against irruptions from time to time of heresies of different kinds. There is a difference between the mercantilism of the Middle Ages and the force behind the recent accumulations of gold in France and the United States of America. Whereas in the past an inflow of gold was consciously striven for, at present no statesman will openly avow that national policy should be directed to promoting an inflow of gold. None the less the evil of large inflows of gold is not adequately realised. There is, on the other hand, a smug complacency about the accumulations of gold in the United States of America and France on the part of the statesmen of those countries. There is not yet an adequate recognition of the need for modifying national policies in respect of tariffs, foreign lending and balance of international payments when such policies result in large gold accumulations. One of the causes of the present world distress is to be found in an absence of widespread understanding of the rules that should be observed in playing the gold standard game. A particular phase of unscientific thought in relation to gold is the uneasiness caused in India over the recent exports of gold from the country. Those who are interested

in securing sound conditions making for economic progress ought to feel gratified that the country has been fortunate in being able to draw upon reserves of gold built up by agriculturists so that the balance of trade has been turned effectively in our favour. India's gold exports have thus helped towards recovery from the depression. Lower money rates, rise in the price of Government paper, a tendency to increase in commodity prices, facilities for the ways and means and remittance programme of the Government of India—these have been among the welcome consequences of the export of gold from India.

T. K. D.

### THE EXODUS OF GOLD

Since it began about the end of September last the exodus of gold from India has been agitating the public mind a good deal. The leading commercial and political opinion has held that it is not in the best interests of the country and has been appealing to Government to place an embargo upon it and to themselves buy the gold offered for sale by the people. The Government, however, maintain that it has been serving India very well. The country has derived nothing but benefit from it. They, therefore, have not only adopted an attitude of indifference towards it but have actually blessed it.

What the leaders of the Indian commercial and political thought allege is this. They say that the gold that is being offered for sale by the people of India is 'distress' gold. The people are parting with it not for the sake of speculative profits but because they cannot help it. Owing to the economic depression the prices of commodities have gone down very much—of Indian products much more than of the foreign commodities. The Indians have consequently been very hard hit. Their incomes have been considerably reduced whereas their commitments in the shape of land-revenue, rent, interest, etc., have remained the same. Those

commitments they must meet. The only way in which they can do so is by drawing upon their reserves which are in the form of gold—ornaments or bars. It is distressful to a degree that the current requirements should be met not from current income but from capital. If such a state of affairs were to continue for some time there is no knowing the sad predicament in which India will find herself.

But as the people must needs draw upon their reserves of gold in order to meet their obligations, it is suggested that the Government should stop the yellow metal leaving the shores of India by themselves purchasing the gold that is being sold at a definite price. If they did that the currency would expand in a more natural way than it was doing now, and the amounts of gold purchased could be used for building up adequate reserves for the future Reserve Bank of India.

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The Government advance the following arguments in support of their point of view. In the first instance, they state that the exports of gold have turned the balance of trade in favour of India. Consequently they have been enabled to buy sterling bills to an extent more than sufficient to meet their ordinary obligations in London and to repay the sterling loan of £15 millions which fell due in the middle of January last. In India, the buying of sterling bills has resulted in a much needed expansion of currency and the lowering of the bank-rate from 8 per cent. to 6 per cent, thus easing the situation considerably for commerce and industry. Secondly, the Government point out that the gold that has gone out of India has been from the accumulated stores of private people where it was lying as an inert and useless mass, and not from the monetary reserves of India which means that the currency position is as strong as ever. Thirdly, it is contended that the total amount of gold that has left the shores of India represents a very small proportion of the total holdings of the people which, therefore, have not been much affected. The

total amount exported has been something over Rs. 50 crores; the total holdings of the population are much more than Rs. 700 crores which is the value that has been imported during the last thirty years only. What are Rs. 50 crores as compared to Rs. 700 crores? Only a drop in the ocean. Lastly, it is said that the amount that the people have parted with has been sold at a good price. They had purchased it at about Rs. 22 per tola and have disposed of it at about Rs. 30 per tola. Thus they have made a profit of about 37 per cent on the sale. What more could they have expected?

The reasons for the Government not entering the market as the buyers of the yellow metal brought out for sale are explained as follows: (1) "For the Government as currency authority to buy gold now that the currency is divorced from gold would be a pure speculation." (2) "The Government could not afford to buy and hold all the gold which is being offered now for it has its own external obligations to meet." (3) "If currency reserves are required, and if we could afford now to accumulate them, we have already our proper proportion of gold. It is rather external securities that we need to complete an ample margin of reserves." (4) "We are indirectly acquiring sterling securities against the gold exports so far as the proceeds are not required to meet the balance of payments due on private account. So far as our financial position permits of it we shall use these securities to increase our currency reserves."

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Between these two divergent viewpoints where does the truth lie? It seems to us that what the Government contend has more force in it than what the other party allege. The gold that has been parted with by the people and shipped out of India has helped the country in its hour of need and that is the purpose that it should have been expected and meant to serve. The usual external obligations of the country have been discharged and the

sterling debt of £15 millions has been paid off. The taxpayer has thus been saved interest charges. The currency has expanded, and the bank-rate has gone down. The merchants and industrialists have therefore received the much-wanted relief. Then the private holder of the precious metal has reaped a big profit on the sale of it and has been able to meet his commitments at a reduced cost—reduced by the amount by which the price of gold has risen.

It is not very clear what is meant by calling the gold that is offered for sale as 'distress' gold. Real 'distress' gold would be that which is sold at a nominal price—say, the statutory price, Rs. 21-3-10 per tola and not that which is disposed of at a profit of about 37 per cent. Even taking the word 'distress' in its widest sense, how can it be held that all the gold that has come out of the hoards is 'distress' gold? Only that portion of it—which cannot be very large—that has been sold by the poor agriculturists and wage earners to pay off their obligations should fall under that description, not all the gold which has been parted with by the rich and middle class people and merchants. Most of it should be termed 'speculation' gold—sold for the sake of speculative profits.

Even if the whole of the gold that has left the shores of India be taken as 'distress' gold, how does it help matters? The people and the country had to discharge their obligations and they could not do so out of their current income. If the gold that had been hoarded was not intended to come to their help at such an hour what purpose was it meant to serve? It had not thus far served any very useful purpose; it had not been of any great help to industry and trade. It had practically remained buried in the bowels of the earth. Certainly it is not contended that it should be like this for all time. Gold is the most valuable asset that a country can have, but it is an asset only when it can be and is mobilised. Otherwise it is a dead inert mass that might be lying anywhere.

As to the point that the Government should themselves have purchased the gold that has been brought out, it certainly would have been speculation for them to have done so at the present time when the rupee is linked to the sterling. Even if they had done so, how would they have discharged the external obligations of India? Goods could not be exported to an extent sufficient to do so, and if the purchased gold had been shipped out for the purpose by the Government, they would have been criticised all the more, nor would it have made any great difference. The only other ways to meet those obligations would have been either by raising foreign loans or by selling securities. But the former would have burdened the country with extra interest charges and the latter would have meant loss of interest as well as of capital owing to the depreciation of securities.

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When all this is said it is not meant that what has been happening in the matter should continue to happen. No, all that is implied is that up to the present what has occurred has been for the good of the country. But it should not be allowed to go on indefinitely now that all interests have been served. Gold is the most valuable possession a country can wish to retain. There is a limit beyond which its exports would be dangerous to the exporting country—and that limit is reached sooner in the case of a country like India that is not much developed industrially. Opinions may differ as to whether that limit has or has not been reached in the case of the gold exports from here. Even if it has not been reached, it is better to be on the safe side and stop short of it. Then, the expansion of currency cannot be indulged in continuously without leading to inflation with all its evils. The inflation point does not seem to have been reached in the expansion of Indian currency, but the country is perhaps not far from it. So, the exodus of gold from India should now begin to be a matter of anxiety to the Government as it has been to the people, and the Government should be ready to take steps to control it.

G. D. K.

## REVIEWS OF BOOKS

ESSAYS ON POPULATION AND OTHER PAPERS, by J. A. Field. (The University of Chicago Press, Chicago, Illinois), June 1931. Pp. xxix + 430. Price \$ 3.50.

Though unfortunately little known to European scholars the late Professor Field was a remarkable person—noted for his original and meticulously accurate scholarship, credited with an important and extensive collection of books on several subjects of his choice and recognised as one of the greatest demographers that America has produced. It is also said that he had such a perfectionist attitude toward's published work, and that meanwhile he was rather content with raising questions than answering them, that the physical volume of his output distinctly suffered thereby. "The word or two that should be spoken in commemoration of him by a British fellow-student of his subjects," and has been written by Dr. James Bonar in his foreword is a highly appreciative, though posthumous, recognition by the professor on our side of the Atlantic. "The story of his life shows that more than one way was before his mind in youthful days; he did not think himself predestined to be Professor of Political Economy, or of anything else. Economists gained when he was added to their ranks not, we trust at the expense of the man himself if his best faculty lay elsewhere. . . . I feel," Dr. Bonar pathetically concludes, "that he had still much to tell us, when the deadly disease cut short his powers of speech two years ago, but we are glad his work, so far as it had gone, is not without record."

What the editor has brought together of this "record work" is divided into fifteen essays of two selections followed by 24 pages of list of books and pamphlets on population in the library of James Alfred Field. The Malthusian Controversy, Eugenical Progress and Birth-Control are among his contributions to demography—ponderous, exhaustive and authoritative they are too. Of his Essay, (No. III) on the "Early Propagandist Movement in English Population Theory" an authority of the standing of Norman Humes has said, "I know of no fine example of historico-economic research in the English language, no matter what tests are applied." Of Birth-Control Field was both a participator and detached observer, and he held that "blind presentation will only increase its notoriety and spread the practice as it has done repeatedly in the past." With



provision he wrote, "if the race is threatened with extinction, or Eugenics proves the policy to be wrong, or the world witnesses a return to naive religious belief, it is conceivable the movement may weaken; but it is more probable that in the next generation it will spread and in time will establish as moral and even obligatory." The Essays on Eugenics perhaps bring the 'pure' Economist nearer to his thoughts. He points that "Eugenics speaks the language of ultimate goals: life in economic society is living in terms of proximate goals and its rewards are in terms of immediate individual advantage. Is it possible or logical to set up ultimate goals which are not related to the prizes for which man strives? "What is wrong," asks he, "with an ideal in which every one pursues his immediate advantage?" Nay, he even holds that "between current eugenic programmes and actual economic setting, there are indications of a real contrariety in principle." A profound question has been asked by him: "Does Eugenics offer a method by which poverty may be eliminated?" though it may be thought that in the discussion, he has made an unfortunate confusion between the economists' objective criterion of 'poverty' and the psychiatric conception of 'sense of poverty.'

To the economist, the students of Social Sciences and of Statistics and to those engaged in the teaching of Economics in graduate work, the three essays in Section II are of abiding interest in spite of their slight antedating. The "outline of the course on the 'Standard of Living'" is an 'outline' only, but is comprehensive and profound. The inclusion of a long note on "Higher Wants"—the traditional higher wants of 'dominant' classes and of 'emulated' classes and of civilisation, the spiritual higher wants of aesthetics, morals and wisdom makes the thesis much broader. Essay No. XIV on "The Logarithmic Scale in Statistical Diagrams" savours too much of an examination students' performance but one for which even after fifteen years' lapse of time cent per cent marks would have been given by the most orthodox examiner. The other Essay No. XIII "On the Place of Economic Theory in Graduate Work" though short—extending only to twelve pages is in reality a *magnum opus*, scholarly, clear cut and emphatic, though slightly propagandist and 'trouncing' which perhaps American Institutions deserved. "The name Economics cannot lightly be applied to bare disorganised observation of the phenomena of industrial society. On the other hand, it is wasted if it is made to refer exclusively to the impalpable substance of abstruse reflection." Again, the notion of historical relativity has latterly accustomed us to read between the lines of English Economics, for example, the politics of merchant princes, the complaints of poor rate-payers, the differences between landed proprietor and a newly risen industrial bourgeoisie."

Nor is this enough, not even the whole range of the older economics will suffice as the basis of economics in the future. "The modern economist must draw suggestion from other sources of thought and borrow new methods, new standards of scientific technique, wherever they are to be found and adapted." To quote further "Particularly auspicious among these ancillary fields of training are statistics and scientific study of so-called commercial subjects. Statical method and economic method are pretty certainly destined to have more and more in common." Characteristic of all the observations in the *obiter dictum* "of the coming generation of economists not all are now professed by or consciously students of economics. Some are students in neighbouring departments of academic discipline, others are intelligent workers outside the academic circle. Nor is it likely that these as yet unrevealed economists will prove to be less significant and original than their fellows whose predetermined careers are now taking shape in the accepted groove of economic instruction."

K. B. M.

PROBLEM OF MONOPOLY AND ECONOMIC WELFARE, by Dr. F. Zeuthen, George Routledge and Sons, London, 1930. Price 7s. 6d. net. Pp. 152.

This volume treats of a group of problems arising when competition is either precluded or limited. The underlying general problem is the century old (actually 1838) but very important problem first dealt with by Cournot and relates to the prices in markets where there is only a limited number of enterprises. As a special example the question of the wage in organised labour markets determined by threats of stoppage is examined at length. The argument is mathematical, though the deliberate use of higher mathematics is actually avoided. The answer to this question leads up to the element of truth contained in the general proposition that price in monopolistic competition or bilateral monopoly is indeterminate and we are generally driven to the Edgeworthian conclusion that as far as purely economic forces go, there is nothing but 'chaos.' Dr. Zeuthen's argument does much to clear up the question and no less an authority than Prof. J. A. Schumpeter has stated in the preface he has written to this book that "nothing of like interest or importance has been written since Prof. Pigou's *Methods of Industrial Peace*."

K. B. M.

INTERIM REPORT OF THE GOLD DELEGATION OF THE FINANCIAL COMMITTEE, LEAGUE OF NATIONS (Geneva, 1930); SELECTED DOCUMENTS SUBMITTED TO THE GOLD DELEGATION (Geneva, 1930); LEGISLATION ON GOLD (Geneva, 1930); SECOND INTERIM REPORT OF THE GOLD DELEGATION OF THE FINANCIAL COMMITTEE (Geneva, 1931).

These reports are of special interest and importance especially in view of the beginning of a new epoch, consequent on Great Britain's slipping off the gold standard on September 21, 1931. Their value lies in the data that the Financial Committee collected; their weakness in the decidedly halting recommendations in the Second Interim Report where we are not given clear-cut rules of the game of the international gold standard. Possibly (and we say so not without reason) the Committee tried to smooth over difficulties and not to tramp on sensitive toes, especially those of France.

The main point of these reports is that, so far as can be foreseen, the gold output of the world is likely to decrease, Mr. Kitchin, for example, estimates that within a decade, the world's annual output of gold will have fallen from £83,000,000 to £76,000,000. Available data tend to show that unless steps are taken to avoid the danger a fall in the price-level due to scarcity of gold will occur in the future, but that if central banks and others take time by the forelock the dangers threatening the price-level can be postponed for a period long enough to make the matter of really little practical importance. The sole practical use of gold today is to meet deficits in the balance of international payments, Gold has been withdrawn from circulation and so an internal demand for monetary gold does not arise. To avoid a future shortage in the supply of gold the Gold Delegation suggests three lines of action—(1) the concentration of all monetary gold in the reserves of Central Banks; (2) the economising of these reserves by the reduction of the current legal minimum reserve ratios; (3) an understanding between Central Banks as to the excess of cover over the legal minimum ratio as occasion demands.

In the last three years the rules of the game have been sadly neglected. I have recently analysed the official returns of twenty countries and compared these with those of the gold hoarders, the United States and France. Since 1928 these twenty countries instead of increasing their gold reserves by 3 per cent each year have actually decreased these reserves by 28 per cent. In 1928 their gold reserves were £781,000,000. Today they should have been at an increase of 3 per cent per annum £851,000,000. They are, however, only £563,000,000. This could not have but led to a serious fall in the price-level. It did. The fall in world prices in the same interval has been from 25

to 30 per cent. The United States and France have increased their gold reserves by £413,000,000 in the last three years and between them hold over two-thirds of the world's monetary gold. These two countries are like the bad farmers who take large crops from the land but never put back anything to fertilize the soil for future crops. Great Britain would never have prospered as she did in the nineteenth and early twentieth centuries had it not been for the fact that she re-lent the gold and did not hoard it or sterilize it. When the financial history of the post-war period comes to be written the historian will be bound to conclude that the gold standard has worked disastrously fulfilling the worst fears that were anticipated and resulting in losses, and secondly, as some one has said, only to the losses of the Great War. Before the gold standard works as it should, it will be necessary for underlying causes, notably war debts and reparations, to be tackled. If France and the United States would lend to borrowers who want capital and also would lower their tariffs there would be a redistribution of the world's gold. The gold standard is no longer functioning as in the pre-war period. Movements of gold have ceased to have their normal effect on the domestic credit policy of certain countries. The Macmillan Committee was right when it said that 'the recent world-wide fall of prices is best described as a monetary phenomenon which has occurred as the result of the monetary system failing to solve successfully a problem of unprecedented difficulty and complexity set it by a conjunction of highly intractable non-monetary phenomena' (para 209). Perhaps the final Report of the Gold Delegation will, when it makes its appearance, point the way to a solution. We wonder.

G. F. S.

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ESSAI SUR LA NATURE DU COMMERCE EN GENERAL, by Richard Cantillon,  
Edited with a foreword by Henry Higgs, C.B. Macmillan and Co.,  
1931. Pp. 394. Price 15s. net.

Richard Cantillon lived in the early part of the eighteenth century. The details of his life are shrouded in obscurity, but we know that he was descended of an Irish Catholic family and had a distinguished commercial career, chiefly in Paris. His *Essai* was written in French between 1730 and 1734, and has been translated into English several times, but never so completely as in the edition before us. The work is divided into three parts. The first is a general introduction to political economy and begins with a definition of wealth. "The land is the source or matter from whence all wealth is produced. The labour of man is the form which produced it, and wealth in itself is

nothing but the maintenance, conveniences and superfluities of life." He then goes on to discuss the association of people in villages, towns and cities, the wages of labour, the theory of value, the par between labour and land, the dependence of all classes upon landed proprietors, the multiplication of population, and the use of gold and silver. The second part is a complete little treatise on currency "probably more profound than anything of the same size since published on the subject." (Jevons.) The third part deals with foreign trade, foreign exchanges, banking and the refinements of credit. It is this third part that entitles Cantillon to fame, for in this he has shown a range of comprehension surprising for his time. The *Essai* is therefore not merely an essay, or even a string of essays like those of Hume, but a systematic economists till Stanley Jevons 'discovered' him in 1881. Even after Even the writings of Sir William Petty ('Political Arithmetic and Treatise on Taxes and Contributions') are discursive and fragmentary when compared to Cantillon's 'Essai.' In many ways, this work anticipates the views of Adam Smith and Ricardo.

In spite of such merits, Cantillon was practically unknown to economists till Stanley Jevons 'discovered' him in 1881. Even after that, economists were reluctant to accord him the place he deserves, and even Marshall had doubts about the 'solidity' of Cantillon's views. Subsequently, Professor Foxwell, a keen critic of economic tracts, gave Cantillon a high place among the first exponents of economic theory. Mr. Henry Higgs, who has perhaps examined Cantillon's writings more thoroughly than any other writer, has recorded the following verdict: "After reading well over a thousand economic writings of earlier date than 1734, I would put Cantillon's analysis of circulation of wealth, trite as it may now appear, on the same level of priority as Harvey's study of the circulation of the blood." Such a treatise deserves to be treasured; and Henry Higgs must be congratulated on the masterly way in which he has edited it.

P. J. T.

IMPERIAL ECONOMY UNITY, by Lord Melchett. George Harrap, 1930.  
Pp. 194. 2s. 6d.

This is a topical tract intended to convince statesmen that free trade within the Empire is feasible and advantageous. Several chapters are devoted to a survey of the resources of the Empire, agricultural, industrial and mineral; and suggestions are made for developing them in the interests of the Empire. The idea is at least as old as the days of Joseph Chamberlain, and may even be regarded as a

vestige of the old colonial system. The aggressive (or is it the defensive?) aspect of it developed with the growth of the United States, Germany, France and Japan as industrial powers.

The idea is magnificent, and if it can be materialised, it may meet, to a large extent, the need for a world economic organisation. The lack of geographical contiguity between the different parts of the Empire has been a weakening influence, and even the latest developments in long-distance transport have not made any substantial change in the situation. All the dominions have developed their own economic policies and impose tariffs upon the goods coming from the mother country and from sister dominions and colonies. Canada's position is, in this respect, the most significant. She is economically more connected with her neighbour, the United States, than with the distant mother country and has given definite encouragement to the investment of much capital from the U. S. A. within her territories. As Mr. Ray points out in his book on 'The Future of Empire Free Trade,' while there are only a few branches of British firms in Canada, there are as many as 700 branches of U. S. firms there. Indeed Canada and the other dominions do give some preference to British goods, and this commenced more than three decades ago; but any large extension of it is prevented by the pressing needs of revenue. Sir Wilfred Laurier, the Canadian Premier, put it pointedly at the Colonial Conference of 1907. "Though I hold as an ideal policy," he said, "a policy of free trade within the Empire, even if at this moment the British Government were to tell us, 'yes, we are prepared to give you a preference; that is to say, we are prepared to give Free Trade all over the Empire,' I would not be prepared, for my part, to accept it. . . . I would have to say for Canada that we are not prepared to do that because we must insist upon our system of customs duties in order to raise our revenue" (p. 46).

Further, the Empire is by no means self-sufficing in the matter of essential resources. For example, in the case of petroleum and raw cotton, the best qualities are now outside the Empire, and although much has been done to stimulate the culture of raw cotton within the Empire, its efficiency remains to be seen. Nor is economic harmony within the Empire so easy of attainment. Lord Melchett would expect India to remain an agricultural country, producing raw materials for industrial countries, but this state of things is now rapidly passing away. The predominance of Lancashire in cotton manufactures has been effectively challenged by Japan and even India, and not even the stoutest optimist will ever dream that Lancashire could regain the lost ground. And further, the chief markets for Indian exports are outside the Empire. Thus, with the grant of full fiscal autonomy for

India, one wonders whether the goal devoutly wished for by Lord Melchett will be brought nearer. How the Statute of Westminster will react on the situation remains to be seen. The latest factor to be reckoned is the proposal to have an "Empire Currency" based on sterling.

The author has made out a strong case for imperial economic unity, but it is doubtful whether the integral parts of the British Commonwealth of Nations will follow the lead so earnestly given by one of the greatest British captains of industry.

P. J. T.

EXCHANGE, PRICES AND PRODUCTION IN HYPER-INFLATION, GERMANY, 1920—23, by Frank D. Graham. (Published for the International Finance Section of the Department of Economics in Princeton University, Princeton University Press). Pp. 362. Price \$3.50.

The story of currency inflation in Germany during the period 1920-23 is undoubtedly the most stirring episode in monetary history. In this volume Prof. Graham has presented a scientific study of the vagaries of the mark which was solidly based on gold in 1913, and the value of which was something more ridiculous than zero in 1923.

A unique feature of currency depreciation in Germany was, as is shown by the author with a wealth of detail, that the mark fell much more in foreign exchange than in internal purchasing power, i.e., foreigners lost confidence in the mark sooner than the Germans. This gave a great stimulus to German exports. Towards the end of the period, however, the Germans themselves lost confidence in the mark and in November 1923 came the final collapse.

A very interesting fact is pointed out by the author. The will to check depreciation in Germany was not very strong. Prof. Graham is of the opinion that there was no national loss of substance on account of the phenomenal fall of the mark. The middle class bore the brunt of the loss while the industrialists and merchants materially improved their position. The gain of Germany from the sale to foreigners of money, which soon became worthless, amounted to several billions of dollars. Again, it was widely believed in Germany that improvement in public finance would lead to still more severe reparation exactions by the victors in war. However, it was the occupation of the Ruhr by the French and the Belgians and the enormous issues of paper mark to finance the passive resistance movement offered by Germany to the aggressors which finally led to the collapse of the mark.

Part I, especially the brilliant introduction and Part IV would be read with great interest by the general reader, for in these portions the thrilling story of the fall of the mark and its consequences is told with consummate skill.

Part II is a very valuable contribution to monetary economics. It gives the students of economics a masterly treatment of the question how far the orthodox theories on currency and exchange were confirmed or repudiated by the stupendous happenings in Germany. The sections on velocity of circulation of money, on the limitations of the quantity theory of money, on the close correspondence between actual exchange rates and the theoretical pars based on relative prices, should be carefully studied by all who want to be up-to-date in monetary economics.

Part III will appeal to the statistically-minded.

In short it is a brilliant exposition of the most striking monetary experience in the history of the world and would be read with keen interest both by students of economic history and by students of economic theory.

D. L. D.

THE COTTON AND INDUSTRIAL LANCASHIRE, 1600—1780, by Alfred P. Wadsworth and Julia De Lacy Mann. Manchester University Press, 1931. Pp. xii + 540. Price 25s. net. (Manchester University Economic History Series No. VII.)

It is in the fitness of things that the University of Manchester undertook the publication of this book which deals with the early history of the Lancashire Cotton Industry and of the cotton trade in England. The authors have made a detailed study of the beginnings of the Cotton Textile Industry in Lancashire in the early days of the seventeenth century and of its gradual evolution till the introduction of the factory system towards the close of the eighteenth century. In that connection, they have also traced its parallel development in France and have dealt with some of the salient features of working-class life of Lancashire before the advent of the Industrial Revolution.

There is no doubt a lack of unity in the book, as the authors themselves have admitted in the Preface, due to the fact that they began their researches independently—each dealing with particular aspects of the sixteenth-and-seventeenth century commercial history of England. Nevertheless, it is an interesting and valuable study and is an important contribution to the commercial and industrial history of England for those centuries. The authors have put before us for the first time, we believe, a mass of hitherto unpublished information



in that connection. Chapter VI which deals with Indian Influence on the Cotton Trade of England and Chapter VIII wherein certain figures relating to competition between Indian and British cotton piece-goods in the African market during the eighteenth century are given, will be of special interest to Indian readers.

A number of maps, charts and a very good index add to the utility of the book. The get-up is also excellent. We wish a similar piece of research on "The Cotton Trade and Industrial Bombay" were undertaken by some of our Indian economists.

S. C. B.

THE STATISTICAL YEAR-BOOK OF THE LEAGUE OF NATIONS, 1930-31.

Published by the Secretariat of the League of Nations, Geneva, 1931. Pp. 279. Price 7s. 6d.

The League of Nations has been publishing very useful literature on economic, political and legal subjects every year. One of its most important annual publications is the Statistical Year-Book, the publication of which began in 1929.

The Year-Book under review gives the most up-to-date statistics of area and population, trade, transport, agricultural, mineral and industrial production, public finance, exchange, prices, wages, unemployment, labour disputes, etc., relating to sixty-one countries of the world.

The Year-Book contains 121 tables the following of which are of special interest at the present moment: discount rates of Central Banks, market rates of discount, index numbers of shares, yield of bonds, unemployment by groups of industries, strikes and lock-outs. The book contains for the first time several specially prepared geographical maps.

The usefulness of the book has been greatly increased by a detailed alphabetical cross-index, both by subjects and countries at the end of the volume.

D. S. D.

INTERNATIONAL INSTITUTE OF AGRICULTURE: The Agricultural Situation in 1929-30. Pp. 174. Rome, 1931.

This small and attractive publication is the first volume of its kind brought out by the International Institute of Agriculture. It deals with an economic commentary of studies of world agriculture based

on the statistical data supplied in the International Year-Book of Agricultural Statistics for 1929-30, and intended to give an indication of the principal tendencies shown in the agricultural situation.

The whole volume is divided into four chapters. The first chapter deals with the problem of 'The Agricultural Produce Market,' the second with 'Government Measures of Farm Relief,' the third with 'Action taken by Voluntary Organisations in the Interest of the Producers,' and the fourth with 'The Economic Conditions of Agriculture.' In this publication the question of cereals particularly wheat is especially emphasised. References have been made to facts and measures belonging to earlier periods, before and during the war, for proper interpretation of the present development of agriculture.

Though the present volume is the first of a series of Economic commentaries which it is proposed to publish annually and therefore quite capable of improvement, yet it contains much that is of interest and value. Later supplements of this character to the International Year-Book will undoubtedly throw a flood of light upon the economic conditions of world agriculture, if they happen to include references to a greater number of countries and also contain enquiries relating to a larger number of agricultural products with a critical analysis of the situation of certain other branches of agricultural activity. A further improvement in the work will be effected, if it presents a thorough examination of correlations existing between the fluctuations of production, trade and prices of certain products.

S. L. A.

THE APPROACH TO ECONOMICS, by H. M. Scott. Christophers, London. Pp. 211. Price 3s. 6d.

This little book explains in simple and clear language the elementary principles of economics. It touches, though in brief, almost all important topics connected with the subject. Everywhere illustrations are given profusely to make the meaning clear, and diagrams are also used in Chapter III on Demand to explain the movements of prices. For beginners it contains a valuable store of information.

The author has dealt with the modern Optimum theory of population, explained the difficulty in distinguishing Land from Capital, and described similar other matters affected by recent developments in a striking manner. The book is undoubtedly fitted very much for the use of students of our Intermediate classes, who ought to be familiar at least with such important modifications occurring in economic terminology and thought. In our opinion, too many unneces-

sary details cannot bring as much good to students as a thorough grasp no matter even if it be of the bare basic principles. Our B. A. students also will add much to their knowledge, only if they care to go through it once.

The type and get-up of the book are excellent.

The author is to be heartily congratulated for bringing out such a useful and handy volume.

S. L. A.

THE ECONOMIC EVOLUTION IN ENGLAND, by Frederic Milner. Macmillan and Co., 1931. Pp. 451. Price 6s. 6d. net.

This volume treats of the economic evolution in England from the earliest times to the present. It is divided into four books. Book I deals with the Pre-Conquest Eras up to 1066, Book II with the Middle Ages, 1066 to 1485, Book III with the Age of Nationalism, 1485 to 1760, and Book IV with the Modern Age from 1760 to the present day. Each of these books first gives a general outline of the economic situation and then deals with agriculture, industry, trade, towns, revenue and communications. But economic thought is considered from the second book, and banking and poor law from the third book, onwards as they are not of importance till the periods discussed in those books.

To get an idea of the change that came in the economic sphere in England the situation at the end of each period may be briefly given. At the end of the Pre-Conquest Eras, "England was the laggard of Europe but she had nevertheless made considerable strides" which were almost entirely due to her foreign invaders. At the end of the Middle Ages, capital had come in, and that had "undermined all medieval rural and urban organisation." The Middle class had evolved—the middle class who were "to be the aristocracy of the Tudor period and were to take the place of the old feudal aristocracy," who were "against local separatism, and in favour of the centralisation of the whole nation under a powerful monarchy," who were "responsible for the tremendous prosperity of England from the Middle Ages onwards," and who "made England one of the greatest commercial powers of the world long before the Industrial Revolution made her the "Workshop of the World." At the end of the Age of Nationalism "the foundations for the later developments which were to revolutionise every side of life in England had been laid. Capital was assuming something like its modern importance; industry, trade, and agriculture were advancing; rich men . . . were increasing; and

the general standard of life throughout the whole of the country was rising." In the year 1760 England was on the threshold of a great change. The change took place in the Modern Age in which England has steadily assumed an increasing amount of European and world importance. She has become the wealthiest country in the world, and has only recently been challenged. Her industrial progress has led the way to the rest of the world, her trade has raised the standard of life in every other country, . . . Her agriculture if it has gradually declined in relative importance, is still, technically, of very high standing, her shipping is still the greatest in the world, and in her treatment of labour she has shown that decency and good conditions are essential for efficiency."

The volume is excellently written. Its subject-matter is very well arranged and carefully analysed. It affords a very pleasant reading and is moreover up-to-date which very few economic histories of England are. We accord our whole-hearted welcome to it.

G. D. K.

THE INDUSTRIAL EVOLUTION AND THE ECONOMIC WORLD OF TODAY, by L. W. White and Shanahan. Longmans, 1932. Pp. 378. Price 6s. net.

As the title of this book indicates, the book is divided into two parts. Part I deals with the industrial evolution or the history of economic and social change, and Part II concerns itself with the economic world of today or the present-day economic system and its problems. Altogether there are sixteen chapters in the book, nine in Part I and seven in Part II. Part I begins with a narration of the rise and decline of mercantilism and goes through the history of the revolution in agriculture, industry, communications and trade and commerce, and then describes the growth of trade unions, the amelioration of working and social conditions and the relief of poverty, sickness and distress. Part II discusses the structure of the modern industrial organization, the financing of industry, trade fluctuations, international trade, unemployment, public finance and current economic and social questions.

The book owes its publication to the fact that there was no book available that would explain "in terms which the sixth form student of history or modern subjects can readily understand, the essential features of post-war economic life and the way they have grown out

of the past." There is no doubt that this deficiency has been very well supplied by the book. It gives in an easy style and as comprehensively as needed a very good idea of the course of the Industrial Revolution in its various aspects and of its different results as well as of the chief features of the present-day industrial structure and the various social and industrial questions that have arisen out of it—questions like the cry of back to the land, the conflict between labour and capital and the greater equality towards economic welfare. As regards the last of these questions the conclusion of the book may be noted. It is—"Greater equality of economic welfare is in itself a very desirable thing, but . . . it is almost certain to lead for a time to a slackening off in aggregate production. For two reasons. The incomes of the wealthy are thereby reduced and so also are the natural savings which in every country come from the surplus incomes of those who have more than they can easily spend, not from any increased receipts of the workers. The volume of production suffers not only through the small sources in working capital, but also because wageearners take out part of their improved welfare in more leisure. Great Britain appears just now to be moving towards greater equality of material welfare at the cost of a less rapid advance than hitherto in economic progress. If the process is continued, the economic leadership of the world must definitely pass elsewhere, it may be to the United States."

The book is very well written indeed. Not only is it useful for those for whom it is primarily meant but also for students of Universities and for the general reader. We would gladly recommend its perusal to all those who are interested in economic evolution and the present-day problems of industrialised countries.

G. D. K.

**FIELDS AND FARMERS IN OUDH:** University of Lucknow—Studies in Economics and Sociology. Edited by Radhakamal Mukerjee, M.A., Ph.D., Professor of Economics and Sociology, University of Lucknow. Published by Longmans Green and Co., 1929. Pp. 302.

The Introduction is by Dr. Radhakamal Mukerjee while the three papers comprising the volume are

"A Social and Economic Survey of Village Malhera, District Haridwar," by Krishna Sahai Asthana, M.A., Professor of Economics, Government Intermediate College, Fyzabad;

"An Agricultural Survey of Bakshika Talab, District Lucknow," by Girwar Sahai Saksena, M.A., Lecturer in Economics, Agra College; and

"Agricultural Labourers; An Inquiry into their conditions in the Unao District," by Hari Har Dayal, M.A.

Dr. Mukerjee says that these papers were submitted as theses for the M.A. by the respective candidates.

In his introduction Dr. Mukerjee bewails the absence of an Indian School of Economics and Sociology: "nowhere has there been a greater neglect of the realities of economic life than in the curriculum of Economics in Indian Universities . . . "Few constructive programmes," there are, Dr. Mukerjee says, "which the masses can understand and work out for immediate benefit." The prospect does not appear to be so gloomy as, among numerous efforts towards this end in the different Universities in India, Dr. Mukerjee is himself taking no mean share. The rest of the introduction deals with the notable points in the three papers, and the fundamental importance of economic inquiries. The Editor notes how "the cultivator's time table, costs and profits, the size and distribution of his holdings, his poverty and indebtedness, have all been subjected to a meticulous examination" by the author of the first paper. The size of the average holding is less than four acres in the southern portions of the U. P. while it is more in the north-western portions of the Province. "The discrimination of tenants according to castes, the levy of nazars and blunts, the enhancement of rents, absentee landlordism—all have their share in depressing the position of the small tenant." "With labour uneconomically distributed as between minute holdings of one's own and inefficient operations in the fields of others who despise manual labour, agricultural cost constantly rises, touching upon the low standard of living of the people."

Turning to the importance of repeated economic inquiries, Dr. Mukerjee says: "The net gain to the areas served by the canal systems from an introduction of a new crop or a change in the system of rotation which will accompany canals, can only be estimated after a careful scrutiny into the size of the economic holding, normal agricultural costs and outturn, normal profits, etc., in typical areas and over a number of years."

While all interested in Indian rural economics should congratulate Dr. Mukerjee on his giving out such papers dealing with rural conditions in particular areas, certain observations are offered here with a hope that all interested in rural economics will take them in the right spirit, as from an humble worker who has spent some time on such

work. Agriculture, soil physics, irrigation and economics are widely different subjects. Yet the first three have such a close bearing on the economic well being of man that the usual tendency for the economic researcher is (probably unconsciously and with the best of motives) to trespass into the province of the agricultural chemist, the soil physicist and the irrigation engineer. Specialisation is the order of the day, and experts in those fields would smile at many of the generalisations which many an economics student has put forward on matters relating to their respective fields. While these experts themselves are feeling that they cannot say the last word on problems facing them, it would be quite pointless for us to rush to expression of opinion on problems really theirs. For instance, the third paper has the following sentence :

“The land is frequently unevenly watered and the subsequent cultivation is not uniform, leading to a poor tilth” . . .

“When canal water however abundant and cheap, is misused by the cultivator, the natural fertility of the soil is apt to suffer and give adverse and poor returns after a few decades of successful crops. No modern system of improved agriculture would be complete by itself as long as there is (was?) a divorce between the triple problems of water-saving, fodder production and methods of cultivation.”

A second danger to be scrupulously avoided is quotations from periodical publications of economic statistics by Government, and from other writers in the presentation of the results of such original inquiries. The publication under review is beset with frequent quotations from Cannan, Darling, Neville and a few others. Chewing on such official statistics and other writers, sitting in the University library, is categorically different work from going out to villages on field work, making direct and full inquiries, compiling and verifying data on the spot, and putting such data before the world. Of course, a few explanatory remarks along with such data cannot but be welcomed. And such compilation, for the sake of precision and completeness, should be limited to a few questions in the case of each or a set of researchers. The three authors have done some field work, but the original data (with names and figures in each case) are not given. The publication should have certainly been much more valuable with these data in fullness. Certain anti-mahajan generalisations by the third writer would certainly be challenged by the mahajans of the Unao District, but if the author had given (if he had really collected and analysed) full data supporting his generalisations, the challenge should not be so easy. On the other hand, the grim situation should

have been realised by the reader in clearer perspective. Half a dozen such publications of **full data** must reasonably lead to healthy bills being put up before the local legislature.

Another equally important effect of the publication of the full data, would be to show the true place of economic motives in Indian rural life. Ignorance, illiteracy, superstition, fatalism, and a rare kind of instinctive hospitality and charity—all have combined to persuade a very large number of villagers in this country to attach little importance to wealth. They do not admit that wealth and welfare are directly proportionate to each other, nor do they believe that business calculations always come true in practice. Such astonishing (yet not quite irrational) apathy to problems of food, clothing and shelter can be best shown up to doubters only by means of data actually collected.

The task of collecting data is by no means easy: it can easily be misdone. Such work cannot be ordinarily done properly by students—under-graduate or post-graduate whose aim is the University degree. Nor can it be done by the ordinary honorary worker who would generally not care to bother himself beyond a point. Fully qualified and experienced wholetimers should be allowed to take up such work, preferably confining themselves respectively to a few problems.

Dr. Mukerjee is a laborious worker, and it is earnestly hoped that future issues of "Studies in Economics and Sociology" of the University of Lucknow, will help us along the directions indicated above

S. K. I.

MALABAR AND THE DUTCH, by K. M. Panikkar. Messrs. D. B. Tara-porevala Sons and Co., Bombay, 1931. Pp. 188 + 7. Price 6s.

Mr. Panikkar's book, 'Malabar and the Dutch,' is an excellent piece of historical work: and, based as it is, on original documents it is specially valuable. Not only the subject-matter of the book, but also the style in which it is written, makes it an interesting study. In its survey of the Dutch connection with Malabar, the author has shown that the connection began immediately after the decline of the Portuguese naval power on the Indian seas. The Treaty which the Dutch concluded on their first landing on the Malabar coast with the Zamorin, Emperor of Malabar, gave them first footing on the soil in 1604. Their endeavours in the early period of settlement were directed to wash out the last vestige of Portuguese influence in Malabar. With



this object in view they established a base in Ceylon, fought the Portuguese and expelled them from Cochin—a Portuguese stronghold and a position which controlled Malabar trade. The Dutch had as their ultimate aim the capturing of the Malabar trade and, therefore, concentrated their attention on Cochin, occupied the fort and took on hand the consolidation of the commercial and political powers of the company. The power of Cochin Raja was smashed and he was forced to enter into agreements by which virtually Cochin State was handed over to the Dutch. The Zamorin also helped the Dutch in building up their influence in Cochin and in the neighbouring states, and for this he was rewarded by the Dutch with important positions in the neighbourhood of Cochin. Thus grew up rivalry and feud between Cochin and Calicut a situation which helped the Dutch in gaining their end.

The Dutch trade, however, did not flourish, because the petty chiefs on the coast getting disgusted with Dutch aggression, openly traded with the English and a great portion of the pepper produce of the country used to reach the English.

It was indeed unfortunate for Malabar that the Zamorin rather than join hands with Cochin to check the exploitation of the Malabar trade by foreigners, adopted a policy of self-aggrandisement at the expense of Cochin Raj. Open hostilities ensued between Cochin and Calicut; and the Dutch supported Cochin. The campaign no doubt ended in favour of the company; but the benefits derived therefrom were not commensurate with the enormous expenditure incurred by them. While the Dutch were engaged in warfare with the Zamorin, a new power appeared on the horizon of Malabar which threatened the Dutch supremacy and ultimately destroyed it. This was Travancore.

Travancore had a chequered history. Originally it was a small principality, and did not count much in the general politics of Malabar. Internal dissensions among the chiefs reigned supreme till the time of Martanda Varma. Martanda Varma on his accession to the throne set himself to the task of establishing order and peace in the State. Partly with the help of Moghul forces and partly with the army he raised, Martanda Varma ticked the nobles sentencing forty-two of them to death. Thus he struck at the root of the old feudal system and established autocracy of a stern type. After suppressing the subversive forces in his state, Martanda Varma consolidated his position in the adjoining territories. The Dutch who were already feeling nervous on account of the progress of Travancore, came in direct conflict with him over the question of Quilon gadi which Martanda claimed himself on the death of the king. A fierce battle was fought at Colachel in which

the Dutch army under Van Imhoff suffered a defeat. This decided the fate of the Dutch; and they never recovered from this terrible defeat. For Travancore the main obstacle was removed, and Martanda Varma marched on victoriously with his expansionist policy. Rajas of Kayamkulam and Purrakad were subdued. While engaged in these campaigns the Dutch suffered heavy loss in pepper trade; and the military expenditure depleted their treasury. Placed under a very awkward position, the Dutch entered into a treaty with Travancore by which the Raja undertook to deliver pepper annually 1,509,999 lbs. and the Dutch surrendering all the pretensions of political authority.

The situation in Malabar by the attempted invasion of it by Hyder Ali added to the difficulties of the Dutch and they sought alliance with the Raja of Travancore. Having failed there, the Dutch made the last attempt to save themselves by asking the Colombo governor to send them reinforcements. Luckily for them Hyder did not attack the Dutch possessions being preoccupied with the English elsewhere. He was succeeded by Tippu who started on the plan of attacking Travancore, but Ayakotta fortress in the possession of the Dutch stood in the way. Having failed to buy up the fortress, Tippu fought with the Dutch, but lost heavily. Soon afterwards British invasion under the command of Major Petric forced the Dutch to yield, and thus the Dutch flag ceased to fly on the Malabar coast in 1795.

Chapter X of the book deals with the Dutch administration and trade. It is indeed a very interesting and instructive account of early foreign administration and also of the vicissitudes of Dutch trade. The subject has been enlivened by the comparative study of the Portuguese system of administration and trade policy with those of the Dutch. In this the author has given ample evidence of his scholarship and clear insight into the details of Malabar administration of the period under review.

L. N. G.

**THE INDIAN COTTON TEXTILE INDUSTRY, ITS PAST, PRESENT AND FUTURE**, by M. P. Gandhi, M.A., F.R.E.S., F.S.S., Secretary, Indian Chamber of Commerce, Calcutta. Pp. 127. 1930. Price Rs. 3 or 6s. net.

This monograph is a thoroughly revised and considerably enlarged edition of a successful competitive prize essay on the subject, submitted by the author for the Ashburner Prize, awarded by the Bombay University. Mr. G. D. Birla, ex-M.L.A., the well-known millowner and philanthropist contributes a beautiful foreword.

The book is divided into nine chapters, there is one appendix, an index and a good Bibliography at the end. The first chapter gives a bird's eye view of the trade, manufactures, and quality of cotton fabrics in ancient times and summarises the position of the industry up to the Moghul period. Chapter II deals with the state of the industry under the Moghuls and Chapter III deals with the industrial organisation of the cotton industry up to the end of the Moghul period. Chapter IV discusses the effect on the Cotton industry of the Trade Policy of the East India Company up to 1757. Chapter V is devoted to the discussion of the causes of the decline of the industry under early British rule, while Chapter VI discusses the development of the cotton mill industry in India up to pre-war times. Chapter VII deals with the cultivation of cotton in India and the recent experiments that have been made to grow long-staple cotton. Chapter VIII deals with the hand-loom weaving industry and Chapter IX discusses the post-war problems of the cotton mill industry, while the appendix gives a brief account of the phenomenal rise of the Japanese cotton industry in China and Japan.

As is natural in a small monograph the first few chapters are somewhat sketchy, but the author has taken considerable pains and done laborious research work by having access to several not easily accessible documents and has thrown a considerable light on the history of India's greatest national industry. The book is heavily documented and gives a very fair account of the vicissitudes of the industry in a perfectly scientific spirit. The author has very thoroughly discussed the causes of the decline of the cotton industry. His treatment of the subject is absolutely free from political or racial bias. He rightly appeals to the sentiments of the people in favour of their national industry and we cannot blame him, for sentiment has a rightful place in our economic life.

The chief causes that brought about the decline of the cotton industry in India during the latter part of the eighteenth century and the first half of the nineteenth century are too well-known to students of the economic history of India. The invention of the power-loom and other mechanical appliances, the restrictions imposed by England and other European countries, the loss of the local market, the treatment accorded to Indian manufacturers by the East India Company, the encouragement given to agriculture at the expense of industries, the revolution in the means of transport worked havoc with the industry, with the result that "Long before 1858 when the East India Company's rule ended, India had ceased to be a great manufacturing country."

The author rightly points out that the history of the Indian

cotton mill industry from 1855-56 when the first Indian Mill commenced working up to 1914, is a record of the struggle of an infant industry to establish itself in the country in spite of serious handicaps such as foreign competition, a duty on silver and the cotton excise duty. Whatever progress our cotton industry made was due to some natural advantages, like the proximity of the market, saving of freight, good supply of labour, etc., and not due to any protection which a low revenue duty was supposed to have given it.

The author is perfectly right when he says that the war gave a great stimulus to the Cotton Mill Industry in India. The years that followed the outbreak of the war were years of unusual prosperity for the industry as prices rose by leaps and bounds, but the millowners lost an excellent opportunity afforded by the war of developing their market fully by pushing the sales of their goods in India and exporting their goods abroad. They adopted a narrow and short-sighted policy. In their greed they declared high dividends and made no provision for reserves. The millowners did not foresee that depression might follow the boom period and distributed all their profit which could be drawn upon in less favourable times.

After 1923 the industry has been experiencing unparalleled depression due to the loss of China trade in yarn, the ill-suited currency policy of the Government, unfair competition from Japan, the increase of costs under different heads and the high railway freights.

Every one would agree with the author that the ultimate aim of the Indian Cotton Industry should be to have a full command of the Indian market. In order to achieve this object, it is absolutely necessary that the Government, the millowners and the labour leaders should cooperate together and try to place this valuable national asset on surer foundations. There is already a growing sentiment of Swadeshism among the people and the recent increase in the rates of duty imposed on cotton piece-goods under the Cotton Textile Industry Protection Act, 1930, by the two successive finance Acts has given a certain degree of protection to the industry. The Government of India is also alive to its sense of duty and it has recently (8th April, 1932) ordered a Tariff Board Inquiry into the Protection for cotton textile industry. The Board would shortly examine how far the claim of the Indian cotton textile industry to protection has been established and in what manner and to what extent protection should be given. The appeal of the author to the Government to give the industry adequate tariff protection has met with a somewhat belated response and it is hoped that the industry would receive the close attention of the Government, the capitalists, the labour leaders, politicians and economists, which it so richly deserves.

The author is to be congratulated on producing such a nice and valuable book and his labours would be amply rewarded, if the cotton industry receives adequate help and encouragement from the people and the Government of India.

K. P. B.

HOW TO COMPETE WITH FOREIGN CLOTH, by M. P. Gandhi, M.A.,  
F.R.E.S., F.S.S. Pp. 123. Price Rs. 3.

"How to Compete with Foreign Cloth," by M. P. Gandhi, has appeared at a very psychological moment when the cry of Swadeshi is being heard from every nook and corner of India. The monograph should claim an attention not only from every Indian student of Economics and from every social worker engaged in the cause of promotion of the welfare of the millions of poor peasants suffering under-employment for want of a subsidiary occupation, but also from the Indian cotton millowners.

It briefly describes in a clear manner the history of the Weaving Industry in India from the ancient times and shows the present position of the important national industry. In this connection the landmarks of the policy of the British Government in England and India directed to kill the flourishing Indian handloom industry which was threatening the cotton manufacturing industry in England in open competition, given in Appendix II of the book are interesting.

From the mass of the statistics which the author has hunted out he has made out an irrefutable case for hand-spinning and hand-weaving showing that the fear of competition between hand-woven and mill-made cloth in India is baseless and that the two methods of production are really complementary, having their special fields, and helping each other, the hand-weavers using the extra yarn made by the mills.

Besides showing the practicability and usefulness of hand-spinning and hand-weaving flourishing side by side with the mills, and the two combining to keep out foreign cloth, and facilitating the exportation of Indian cloth, the book shows the scientific method of research work in the field of Indian economic problems.

Finally in the words of Sir P. C. Ray, "the author has had the rare fortune of having the proofs of his work gone through by Mahatma Gandhi and it will be a considerable satisfaction to the public to know that the book has met the general approval of Mahatmaji. . . . He

has also incorporated some suggestions made by Mahatmaji, and thus made his book more useful and authoritative."

R. P.

Review of the Bulletin No. 53 entitled "EXPERIMENTS IN ELECTRO-FARMING, by S. S. Nehru, B.A., B.Sc. (Allahabad): M.A. (Cantab): Ph.D. (Heidelberg): I.C.S., M.L.C.

## I

The bulletin appears as a unique contribution to our records of research on farming problems in India. As the author rightly points out, Electro-farming is in general unsuitable to the present conditions in India, due partly to the small and scattered holdings and partly to the economic conditions of the average farmer. Research in Electro-culture, however, is of the highest value to Agriculture in India since there is much room for improvement both as regards quantity and quality of crops produced. Dr. Nehru has drawn certain conclusions which require further experimental and observational confirmation. Indeed it is quite possible that discoveries of an astounding character lie hidden beneath the surface of a good deal of the work done.

The chapter entitled "Theory of Electro-Culture" is an excellent review of present-day knowledge of the subject and Dr. Nehru's own theories of electro-chemical action would appear to be of more than scientific interest. The generalisation regarding Mosaics and the question of cent per cent recoveries with electric treatment (vide page 139), however, need further verification.

## II

The simple methods suggested for seed energisation are commendable. Dr. Nehru's researches show that energised seed tends to lose its charge in course of time. It would appear, therefore, that the changes which occur in the seed are not of a permanent character. Also while the effect on the quantity of yield is apparent, it has yet to be ascertained as to what happens to quality of the product.

The grid and grille method of field energetics does not appear to satisfy the six conditions for the Indian farmer formulated on page 8 of the bulletin.

## III

Invigoration of vegetative growth by energising seed for plant has been demonstrated (vide Chapter II) but as to whether increased vege-

tative growth has any special significance as regards yield has not yet been sufficiently established (see Chapter III).

A very important suggestion made is that soil energisation is the most fruitful of the three alternatives, viz., energisation of the seed, the plant and the soil. Scientists are well aware that chemical products alone do not function as soil fertilisers but that the whole process of fertilisation is bound up with biological factors. Soil energetics by a simple stimulation of nitrogen fixation and other similar processes in the soil, promises a great future for research of this kind.

#### IV

On page 132 of the bulletin the following statement occurs :

“It is evident that the application of electric forces from outside is sure to stimulate both metabolism and the motion of sap very powerfully.”

Herein lies a danger. Electrical energisation is liable to profoundly affect the established equilibrium in the plant system which might even verge on morbidity. This is admitted by the author on page 142. Complications due to the variable power of resistance to stimulus, variations in climate and local conditions must of necessity make this subject a delicate and intricate one. The limits to tolerance have yet to be worked out for each individual crop under different conditions of climate and environment. This is no easy matter and in any case the investigation is well above “the plane of the ordinary tenants’ intelligence” (vide page 143). But it provides considerable food for thought for the scientist.

#### V

The electrical treatment of plant diseases and pests, as also the relative tests with the various electrical methods applied to the potato crop, are matters that appeal to the scientific agriculturist and are of more than academic interest. Heavy yields, resistance to disease and economies in the application of manure by applying electrical stimuli, are all of profound importance to present-day agriculture particularly in India. Dr. Nehru has done pioneer work in this direction which if further investigated may lead to results of far-reaching importance.

**THE MILK SUPPLY OF LYALLPUR.** Report on a Preliminary Survey, by S. Labh Singh, B.Sc., L.Ag. The Board of Economic Inquiry, Punjab. 1930. Pp. 26. Price As. 4.

It is usual to picture a canal colony in the Punjab as a land of milk and honey; Lyallpur, which is in the heart of a canal colony, is at any rate flowing with milk. The citizens of Lyallpur according to the above survey consume per capita more milk than the inhabitants of not merely other famous cities in India but also those of European cities like London, Glasgow and Edinburgh. We should not forget, however, that the majority of the population at Lyallpur do not take other animal foods to the extent Europeans do. Allowance has also to be made for the inferior quality of milk at Lyallpur. But there is no question that among Indian cities such high milk consumption is a sure sign of prosperity.

This survey had its origin in the attempt to examine the correctness of the popular belief that the gujars or cow-keepers increase the quantity of milk at the expense of quality by some system of feeding. This has been entirely disproved by the disclosures of the careful—though for reasons stated not quite infallible—tests to which all sorts of milk were subjected in turn. Deliberate and skilful methods of adulteration really account for low quality though the producers themselves sedulously foster the view that there is an inherent inferiority in the milk yielded by the city cattle.

The scope of the enquiry gradually widened itself into a survey of the whole field of milk supply in the city. But it is admittedly incidental and preliminary in character. We have little or no data on some vital points on which conclusions have been advanced, e.g., the costs of production and sale of milk in town and country, the rates of interest paid by gujars, the degrees of adulteration practised by producers, middlemen and retailers and the corresponding margins of profits. We hope more intensive investigation on these points will follow.

We are, however, prepared to believe that "the gujar in spite of adding to his income by such illicit means is not well off." This is said to be due to the high costs of production in cities and the high rates of interest. Almost identical was the conclusion reached by Mr. A. Curruth after a more elaborate survey of the Madras Dairy Trade in 1917. Said he: "There is no question that were it not for the adulteration practised, the dairymen could not live."

Legislative control of the sale of milk by prescribing standards of purity will, the brochure presumes, be comparatively easier in Lyallpur as the supply is sufficient and demand will not go down if there



be a rise in price as a result of restriction. We cannot be quite so sure of the inelasticity of demand even in prosperous Lyallpur, nor of the feasibility of guarding against fraud in respect of purity on account of the complexity involved in the production, side by side, of buffaloes and cows' milk.

If the present supply and present prices are to be maintained but purity achieved, a reduction in the costs of production is necessary. This can be brought about by an improvement in the milk yield, the removal of animals to a suburban area and the provision of cheaper credit. Suspicion of milkmen will grow unless purity is guaranteed by a trusted agency. The best hope of betterment lies in the building up of an efficient co-operative organisation in the interests of both producers and consumers.

K. C. R.

FARM ACCOUNTS IN THE PUNJAB, 1928-29, by H. R. Stewart, I.A.S., and S. Kartar Singh, B.Sc. Ag. The Board of Economic Inquiry, Punjab. 1931. Rs. 2. Pp. 256.

This is the fifth of the series of publications on 'Farm Accounts in the Punjab' and exhibits the results of close investigations made into the cost of lifting water from wells by bullocks and Persian wheels in districts noted for well-irrigation. The first four of the series were concerned with the study of costings on canal-irrigated farms, which cover nearly thrice as great an area. But the number of permanent wells is on the increase and the potentialities for such irrigation are quite great in several districts in the Punjab, though in a few there has been a marked decrease in the last twenty years.

The main object of this enquiry was to collect data to find out the cost of lifting water in various centres by bullock power and in one or two centres by electric pumping on a small scale. The opportunity has been availed of to note down incidentally other items of cost of cultivation and the practices that obtain in respect of production, distribution and disposal of produce. We have indeed a formidable array of facts and figures, much of which are tabulated, running up to 250 pages. Only the authors have not chosen to interpret the data not connected with their theme of the cost of lifting water. The patient student of rural economics who wades through the wealth of details will find interesting information as regards local agricultural practices, e.g., the co-operative (unofficial) crushing of sugarcane, the use of tractors and even reaping machines, the distribution of produce

between the landlord and the tenant, the bestowal of alms to the poor from the harvest-heap.

The method of calculating the cost of lifting water from wells, variously situated, is carefully explained which may serve as a guide for similar investigators in other parts of India. On the average a pair of bullocks had 180 days of work per annum on the holdings under wells, while in canal-irrigated tracts they had but 100 days' work. But the number of animals kept on the same size of holdings under both systems of irrigation seemed to vary little. Only the animals lifting water did that work in addition to cultivation (ploughing, etc.). If for the latter work, the minimum number of animals required were not lower than those needed for both cultivation and irrigation, the economy of electric pumping compared with lifting by animal power, though established beyond doubt, could not be of much avail.

The authors show that it is definitely cheaper to pump water by small pumps using electric energy than to raise water by bullocks. The cost of current is much less than the cost of maintaining a pair of bullocks. They have not included the cost of transmission lines, and they admit that the interest and depreciation charges on pumping plant are much higher than the same on Persian wheels: while the efficiency of the latter is much higher, if they are all-iron instead of earthen pots. The interesting suggestion they offer is that of connecting good iron Persian wheels to the electric supply. On the minimum number of average animals required for cultivation proper under different conditions of soil, water and crops, the authors seem to feel the need for more intensive investigation. If the number maintained at present could not be reduced the chances for electric installation for lifting water would be poor indeed. We eagerly look forward to the continuance of this scientific series of Farm Accounts.

K. C. R.

**THE LAND SYSTEM OF THE HOLKAR STATE: A Commentary on the Indore Land Revenue and Tenancy Act (1 of 1931),** by C. U. Wills, C.I.E., I.C.S. (Retired). Humphrey Milford, Oxford University Press, Bombay. Pp. 136. Price Rs. 6.

The Indore Land Revenue and Tenancy Act of 1931, is a unique contribution to Indian Agrarian Legislation. It is a distinct improvement over the widely established land systems of British India which have been successful over a century, in spite of their defects. By this legislation the defects of the other systems—Raiyatwari, Peasant

Proprietorship, Village landlord and Zamindari of Bengal—have been removed and a lead has been given to the rest of the country, a lead in the right direction and at the right time. It has brought the state and the people nearer. If as is expected laws in the near future are to be made and enforced by the people's representatives then the present Act goes a long way. It is an interesting piece of legislation and all interested in rural problems should read Mr. Wills' book which contains an admirable exposition of the Act.

The author of the commentary, being a member of the Committee on the Bill, seems to have imbibed the spirit of the Act and has very clearly explained and interpreted the underlying object of the state authorities in this book. The Act seems to be of special interest because it is a declaration of principle and the adoption of the policy 'agricultural land for the agriculturists.' And from the Indian States' point of view the Act is an exposition of the characteristic Khalsa System. Recognizing the fact that the business of state is to check the growth of 'landlordism,' and to maintain "the Khalsa System under modern conditions and to protect the small landholder, while he adapts himself slowly to the economic transition from 'status' to 'contract' . . . ." The Act is a valuable document, on account of the increasing pressure of the population on the land there is a keen competition to secure it and to see the cultivator safe under such conditions is the business of state and is the rural problem of the twentieth century.

The move of the state is in the right direction and just according to the times. All interested in the agrarian problem of India should watch carefully the working of the Act and its effect.

The book includes the Act, the notes on its sections and the exposition of the principles which underlie the legislation. The printing and the get-up of the book are excellent.

M. S.

AN ECONOMIC SURVEY OF TEHONG, a village in the Jullundur district of the Punjab. Inquiry conducted by Anchal Dass, B.A., under the supervision of H. Calvert, B.Sc., C.I.E., I.C.S., Financial Commissioner, Punjab. Punjab Village Surveys—3. The Board of Economic Inquiry, Punjab. 1931. Pp. 346 and three coloured maps. Price Rs. 4.

Though it was first in the Bombay Presidency that Dr. H. H. Mann in collaboration with some of his Indian assistants began the intensive study of rural life in our country, the Punjab among British provinces

and Mysore among Indian States have since gone far ahead of all other provinces and States in this particular domain of economic investigation. The Punjab has indeed been fortunate enough in having the services of such distinguished administrators as Darling, Calvert, Brayne, Strickland, etc., who have taken an unusual amount of interest in the economic progress of the Punjab and especially of its villages, and to whom the Punjab peasant owes a good deal of the attention that is being paid to his well-being by the Government and the public. The Board of Economic Inquiry which was first set up in the Punjab has been the model that other provinces have since been copying.

In the preface to the book, Mr. H. Calvert, I.C.S., under whose personal supervision the inquiry was conducted, tells us of the scheme of publishing such surveys of twenty-nine villages—one from each of the twenty-nine districts of the province. Of these, two (including the book under review) have already been published, one is in press, and twelve more are under preparation. When all these twenty-nine surveys will be published, they will form an unrivalled store of information regarding the economic condition of the Punjab villagers. It is, however, hoped that too much time must not elapse between the various surveys made, so that changes in the time element may not considerably alter the conditions prevailing at the different villages at different periods of investigation. For instance, the conditions revealed by the survey of Tehong village made in 1925 will hardly bear comparison with those of another village found out by a survey made now, without making sufficient allowances for the changes undergone by the Tehong people during this pretty long intervening period. And, from this point of view, we must say that in spite of the excuses put forward by Mr. Calvert, the publication of the book under review in 1931 of an inquiry conducted in 1925 is rather too late. Let us hope that things will be expedited in the future.

This big volume of over 300 large pages is crammed with information regarding the economic condition of the villagers of Tehong in the Jullundur district. The survey is based on the questionnaire, prepared by the Board of Economic Enquiry, Punjab, and used by all investigators, which has been inserted at the end of the book as an appendix (Appendix B). The questionnaire is of a thorough and detailed nature and practically leaves no aspect of the economic life of a Punjab village. Besides, the investigation has been carried out by an intelligent and capable person under the supervision of a most competent guide. The result is that the book is an elaborate study of the economic life of the village in question, illuminated with a mass of statistics and a number of beautiful maps. An idea of the

thoroughness of the survey made can be had from the following chapter headings into which the study has been divided:

(1) General; (2) Cropping and Cultivation; (3) Irrigation; (4) Holdings; (5) Effects of Tenancy; (6) Land Revenue and Taccavi; (7) Indebtedness; (8) Mortgages; (9) Sales of Land; (10) Sale of Village Produce; (11) Purchases and Industry; (12) Price of Land; (13) Yield; (14) Rents; (15) Expenses of Cultivation; (16) Consumption.

In addition, there are four appendices, a good index and three maps. There are as many as 86 statistical tables and statements.

It must, however, be confessed that the information collected is so varied and so minute that a lay reader is likely to be lost in the labyrinth of statistical tables and figures without arriving at any definite conclusion as to the general economic conditions of the inhabitants of the village. But "it is no part of the object of the Board of Economic Inquiry," observes Mr. Calvert in the Preface, "to draw deductions from the information collected; it seeks to collect as accurate data as possible and to present them in an orderly manner. It may be held by some that the information printed in the following pages is too detailed; to this the reply is that the information set forth is really the answer to the question: How do people live on the small holdings in a congested district like Jullundur?" So far as the collection of data and their presentation in a scientific manner are concerned, both these objects have been very eminently fulfilled by the present volume. Still, it would have perhaps been also as good to draw some general deductions instead of treating the investigation as a mere collection of raw materials.

The village of Tehong lies in the Jullundur district of the Punjab, a fertile tract in the lower plains of the province. It is a fairly large village with a population of more than 2,000 people, the majority of whom are Mohammedans, and with an almost equal number of acres of cultivated land. The remarkable feature about the population of the village is that, notwithstanding various measures of rural uplift adopted in recent times, it is of late showing rather a downward tendency and has been almost stationary since the middle of the nineteenth century. The village being a thickly populated one, the evil of small fragmented holdings prevails to a considerable degree, though the spread of the co-operative movement has brought about consolidation in quite a number of cases. Unlike many other places, the amount of mortgage debt of this village does not show any considerable rise in spite of rise in land values. The effect of the latter is, however, reflected in the smaller amount of land mortgaged in later years. Thus, while the amount of mortgage debt increased from Rs. 14,370

in 1899-1900 to Rs. 17,453 in 1923-24, the average mortgage value per acre went up during the same period from Rs. 153 to Rs. 740.

While going through the debt figures and other particulars about the economic conditions of the Tehong people collected by Mr. Anchal Dass, the reviewer cannot help being reminded of his own sad experience in connection with a much humbler attempt of his with regard to conducting a survey of the economic condition of the students and their families of a College in Allahabad. The questionnaire issued in that connection brought down the wrath of the whole Bengalee community of Allahabad upon the poor investigator who was considered by some as a C.I.D. agent, with the result that it had to be withdrawn and the investigation given up: because, the questionnaire, though of a much less detailed nature than that of the Punjab Board of Economic Inquiry, was considered by them to be an extremely offensive one interfering with their private affairs. This is by the way. •

The get-up of the book under review is excellent, and it is in every respect a welcome publication. Taking into account the size of the book, the costly maps and the nice get-up, the price of Rs. 4 cannot be considered as too high. We congratulate the authors on the splendid output.

S. C. B.

THE MINERAL WEALTH OF INDIA, by J. P. Gupta, M.A., B.Com., Commerce Department, S. M. College, Chandausi. Pp. 65 and three appendices.

This is a booklet hardly deserving of any review in a learned periodical like the Indian Journal of Economics. In spite of a page of errata, there still remain spelling and various other mistakes too numerous to be mentioned here. Punctuations except full stops have rarely been used, and the definite article has been inserted or omitted at random. The book also abounds in all sorts of grammatical mistakes, such as plural subjects with singular verbs, wrong idioms, etc. Quotations have been made without giving any references in the footnotes. The statistics are also not up-to-date. When sufficient allowances have been made for all these blemishes, some useful information regarding the mineral resources of India can be gathered from this booklet. But that hardly justifies the claim of the author as made by him in the Preface:

"The reason for bringing out this small book is to provide for the long-felt want on the subject."

The materials collected are scrappy, and any standard book on Indian Economics (e.g., Jathar and Beri's Indian Economics) supplies an equal amount, if not more, of information as has been provided by the author in his compilation in a rather unsystematic and confused manner.

Should a second edition be at all called for, we should advise the author to get the proofs carefully revised and corrected by some competent person instead of hurrying the book through the press.

S. C. B.

PROVINCIAL FINANCE IN INDIA, by Dr. Pramathanath Banerjee, M.A., D.Sc. Macmillan and Co., 1929. Pp. 367. Price 10s. 6d.

Dr. Banerjee's book "Provincial Finance in India" is an interesting and valuable addition to the limited number of books on Indian Public Finance. The subject-matter of the book is one which has always been of interest to the students and scholars of Indian Finance and also one that shall continue to be of interest to them long after India has become a full-fledged federation. In this book, as in no other book, we find a comprehensive account of the historical development of financial decentralisation in India. The facts become more valuable as they are derived from original sources.

The book is divided into ten chapters, the first two of which give an account of Indian finance before the introduction of decentralisation. The next three chapters are devoted to the study of the gradual development of decentralisation, which are followed by three more chapters tracing the history of the Reforms and the working of the new system. The last two chapters review the financial position of the provinces and offer suggestions for improvement. The opportunity for the expression of originality is thus afforded by the last two chapters.

Till 1833, the author states, the three presidencies had their financial systems separated from one another. The method of levying taxes and financial procedures were different. But the surplus revenue of one Presidency (always Bengal) was utilised to meet the deficits of the other presidencies. On the whole the finances showed a surplus of about £600,000 a year.

The Act of 1833 introduced financial centralisation for the first time in India. The Central Government took the fullest advantage of

the power thus vested in them and this discouraged the local governments from taking any pains to increase their revenue or practise economy of expenditure. Grants were made to the provinces on estimates of their needs—estimates which were bound to be very unsatisfactory. Deficits began to appear and recourse had to be had to heavy borrowings. After the Mutiny it was realised that some degree of initiative must be transferred to the provincial governments. Many schemes were put forward but none was adopted.

In 1871 decentralisation was introduced. Such services as jails, registration, police, education, medical, printing, roads, public improvements and civil building were made over to provincial governments, who received all the receipts accruing from them. The central government made a fixed grant to the provinces based on the expenditure incurred in 1870-71, for the discharge of these services. Any deficiency was to be made up by the levy of taxes. Much dissatisfaction was felt at the fixed grant of income and all the provinces expressed their desire that a portion of the provincial revenues should be made over to the respective provinces. The inelastic nature of provincial incomes, which is the cause of much discussion and discontent today, was felt even in those early days. In 1877 the number of services made over to the provinces was enlarged by the addition of such subjects as land revenue, excise stamps, and law and justice. This was counterbalanced by the grant of revenue from law and justice, excise stamps and some miscellaneous items. Madras, however, preferred to continue the old settlement of 1871. The arrangements made with Burma and Assam were changed in 1878.

In 1881 the grant of fixed sums to provinces was replaced by a division of sources of revenue between the central and provincial governments. The provinces obtained the incomes from provincial rates, law and justice, public works and education and one-half of the receipts from forests, excise, license-tax stamps and registration. A fixed percentage of land revenue served as the balancing factor.

In 1887 the contracts with the provinces were revised and their share of the revenue was reduced to enable the central government to free itself from an acute financial distress caused mainly by heavy military expenditure and the fall in the value of the rupee. As this gave inadequate relief to the central government it was decided that the provinces (except the Punjab) should make a contribution in aid of imperial revenue in 1889-90.

In 1892 the contracts were again revised and the central government obtained a further help from the provinces. In 1894 they were again called upon to contribute to the imperial revenue a sum of Rs. 40,50,000, which was restored the next year.



All these revisions of contracts in favour of the central government were indeed very disheartening to the provinces. The remark made by the Lieutenant-Governor of Bengal in 1896 in the course of the debate on the budget is worthy of note in this connection. "The provincial sheep," he said, "is summarily thrown on its back, close clipped and shorn of its wool and turned out to shiver till its fleece grows again."

In 1904 the hitherto periodically changing contracts were made semi-permanent and thus one of the defects of the old system was remedied. The provinces secured a slightly smaller share of growing revenues. The division of resources between the central and provincial governments remained, more or less, unaltered. When any head of revenue was divided, the corresponding head of expenditure was also divided in the same proportion. Some provinces obtained as much as three-fourths of the divided heads. The central government, however, reserved the right to alter this distribution, and this right was exercised in the case of some provinces. These semi-permanent contracts were made permanent in the year 1912.

The changes that took place after the War in the financial relations between the Government of India and the provinces are, comparatively speaking, recent, but for a detailed and somewhat critical account the student should refer to the sixth and the following two chapters of the book.

In the last chapter, in which some constructive criticisms are offered, the author lays bare the defects in the present financial system. The defective distribution of resources between the central and provincial governments and the unequal or rather the inequitable allotments to various provinces are carefully explained. Not only do the provinces suffer because of the extending nature of the functions which they have to perform and the inexpansive and inelastic sources of income which are allocated to them but also because the scheduled taxes themselves are, in their nature, either difficult to assess and levy or only slightly productive. The rival claims of the central and provincial governments on the proceeds of the export duties, the excises, the income-tax and stamp duties are examined. The more complicated problem, however, is to find out a proper basis of distribution of provincial revenues between the various provinces. Three tests are pointed out, namely, those based on revenue, population and needs. Of these the author favours the first, since it is more practicable, but suggests that a combination of the three criteria is likely to yield the best results. The equitable distribution of revenue based on such criteria can then be secured most satisfactorily, the author believes, by a reversion to the policy of divided heads.

Dr. Banerjea's book should be read at least once by all post-graduate students of public finance. To the teachers of the subject the book will be very useful.

J. K. M.

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TRAVANCORE ADMINISTRATION REPORT, 1929-30, Superintendent, Government Press, Trivandrum, 1931. Pp. 291.

Travancore is one of the most enlightened states of India. It occupies the South-West portion of the Indian Peninsula and has an area of 7,625 square miles with an estimated population of forty-four lakhs in 1930. It has a heavy rainfall of 89 inches per annum and extremes of temperature are unknown in the major portion of the country. Villages and village-life are practically unknown except in parts of South Travancore. In rural areas people live in detached homesteads, each living in his own tree planted and walled-in garden. Travancore has its own currency. The silver rupee is equal to 28 chakrams. The value of each chakram is nearly 6-74 pies.

The Administration Report of Travancore State for 1929-30 (1105 M.E.) contains a brief summary of the activities of the various departments of the state and gives much information which would undoubtedly be very useful not only to the people of the Travancore State but also to the rulers of native states and the people of India.

It is very gratifying to note that for more than half a century the Maharajas of Travancore have treated the resources of the state as public funds in the strict sense of the term, appropriating to their own use a very modest civil list. The proportion of the civil list to the total revenue declined from 8.6 per cent in 1888-89 to 3.63 per cent in 1929-30. The rulers of those states in India who consider the revenue of the state as their private property and who extravagantly spend more than five per cent of the total revenue on their personal requirements would be well advised to emulate the example of the ruler of this well-administered state.

The proportion of revenue spent on nation-building departments such as Education, Agriculture, Cooperative, Industries, Public Health, Sanitation, etc., in the Travancore State is much greater than that spent on the same items by the British Government in any part of British India. On account of the wise policy of the state, the general condition of the people living in the state is undoubtedly much better than that of people living in British India. Travancore State has perhaps the lowest death-rate in India. The death-rate for the whole state in 1929-30 was as low as 12.23 per thousand. In the

municipality of Attingal the death-rate was only 8 per thousand. The infant mortality rate for the whole state in 1929-30 was 83 per thousand.

Travancore now stands in the forefront of educated India. From the report we find that in 1929-30 the state spent nearly 20 per cent of its revenue on Education only. If the Provincial Governments in British India spend proportionately as much money on Education as the Travancore State is doing, the total money to be spent on Education would be forty crores of rupees which would be more than three times the present expenditure on Education. We would strongly advise the members of the Indian Legislature to study the budget of Travancore State very carefully with a view to get as far as possible the same proportion of money spent in British India on various items of expenditure.

The report under review contains a coloured map of the Travancore State and many useful charts and diagrams. It undoubtedly deserves very careful study.

D. S. D.

GROWTH OF TRADE AND INDUSTRY IN MODERN INDIA: An Introductory Survey, by C. N. Vakil, S. C. Bose and P. V. Deolalkar. Longmans. 1931. Pp. 398. Price Rs. 7-8.

This work is the sixth of the series—Studies in Indian Economics—edited by Professor C. N. Vakil of the University of Bombay. The work, Prof. Vakil tells us in the Preface, is based partially on the material of the two theses—one by Mr. Bose on the Foreign Trade of India and the other by Mr. Deolalkar on Textile Industries in India—prepared under his guidance during 1926–28, and partially on the additional material collected later. He also informs that Industry in the work does not include Agriculture and that Trade generally means Foreign Trade.

The work as its title indicates does not claim to be an exhaustive account of the growth of trade and industry in the country during modern times—generally from 1860 to the present day, but only an introductory one. It deals with the articles of industry and trade under the heads Articles of Food and Drink, Textiles, Minerals and other Articles—such as Matches, Paper, Oil-seeds and Hides and Skins. Under these different heads, it should be noted, only important articles and not all articles have been considered, yet “the selection has not been entirely arbitrary, because it has been made as far as possible with reference to the importance of the articles, the avail-

ability of information and so on." It should be noted further that the historical treatment of the industry and trade in the various articles which the work purports to give is given only in the case of those commodities in which history was of importance and not in the case of those in which it had no significance owing to their recent growth. It is pointed out and very rightly that "the reader may not expect a uniform treatment of the commodities surveyed in this volume, because the treatment has been adopted to suit the peculiarities of each commodity."

The work surveys quite clearly the general trend of the growth of industry and trade in modern India—a trend which is to form the basis for the construction of an industrial policy for the country. The problem of laying down the principles of that policy is to be taken up, we are told, in the next volume of the series. But what these principles are going to be can be somewhat gathered from what is said in the Introduction of the present work. There after discussing the effects of the rapid development of our foreign trade which has been the main characteristic of the modern times in India, it is said, "We, therefore, arrive at the conclusion that though the growth of our foreign trade has to some extent helped Indian agriculture, a policy of developing the industries of the country by restricting the free progress of foreign trade would have been much more beneficial. We may, therefore, unhesitatingly assert here that the so-called free trade policy of the Government of India, which led to the unhampered growth of our foreign trade to the disadvantage of the industrial progress of the country was a fatal blunder. . . . A right policy would be a system of protection which will guarantee the growth of various industries in the country, and at the same time aim at obtaining the maximum gain by participation in the international exchange of goods." So the development of industries by a system of protection will be the chief item of the future industrial policy of the country. But the growth of industries will be such as to relieve "the pressure of population on agriculture, so that there may be a balanced division of labour between different sections of the people, in order to exploit the resources of the country for the ultimate good of the people themselves."

The volume shows a careful and well-digested study of the various sources studied by the authors in its preparation. It is a very valuable addition to the series which Professor Vakil has been so ably editing and of some volumes of which he is himself individually or jointly the author. We congratulate the three authors whose joint labours have been responsible for bringing out this volume.

G. D. K.

THE SALARIES OF PUBLIC OFFICIALS IN INDIA, by D. R. Gadgil.

Printed at the Aryabhushan Press, Poona City. 1931. Pp. 50.

Price Re. 1.

This short study makes its appearance at a very opportune time. The problem of the salaries of public officials in India has assumed a very great importance. The Central Government as well as the Provincial Governments are faced with huge deficits and find it very difficult to make both ends meet. Then the Indianisation of the services is making great progress and European recruitment is on the decrease. At the top of these things the demand for the extension and development of the nation-building departments is on the increase: but the heavy cost of administration makes it extremely difficult to pay as much attention to that demand as it deserves. A radical reform of the salaries thus becomes a great desideratum. The future of the country is greatly bound up with it. Mr. Gadgil's study discusses the question of the reform of salaries in India, in an able, detached and critical way. It is divided into two parts for the purpose. In the first part the present position of the salaries paid to Indians is considered and in the second part the principles on which the new scales of salaries are to be based are discussed.

The main conclusions to which the study of the whole problem of salaries in India leads the author are briefly, first, that the salaries of the higher grades in India are higher than in any other country and higher than what the finances of the country would warrant; secondly, that the Imperial Services have set the standard for salaries which has to be followed in all other services and employments: thirdly, that the differences in the different grades of the same service are more marked in India than in any other country; and lastly, that the gulf between the earnings of the labouring classes in India is much wider than can be seen anywhere else.

"A relation," he says, "so unequal among the various grades and a salary level so much higher than the income of the masses in India could be justified only on one of the following grounds: (1) That the supply of recruits of the type required is restricted; (2) That there is, as a fact, greater inequality amongst various strata of Indian society than elsewhere; (3) That the social position held by the official is traditionally higher than elsewhere." He holds and we agree with him that "none of these contentions can be held to be valid in India."

The new scales of salaries, he suggests, should be built upon a consideration of Indian conditions and of Indian finances. There should in the first instance be laid down a minimum for the lowest grade of government officials, and then the higher grades above that.

minimum should be so framed "as not to be higher than what is just necessary to attract the higher type of recruit." We are at one with the author here.

The author does not definitely tell us what should be the minimum salary of the lowest grade, nor what should be the maximum salary. But he seems to agree with the recommendation of the Madras Salaries Committee that the minimum pay of a clerk should not be less than Rs. 30 and with regard to the highest salary remarks that the limit of Rs. 500 as proposed at the Congress at Karachi is not "as absurd as a number of solemn people have tried to make it out to be." It is certainly very difficult to set the lowest or the highest limits—so many things have got to be considered in arriving at them.

The study is a very clear, able and valuable one. It should be gone through by all those who have the interests of the country at heart.

G. D. K.

THE INDIAN PEASANT UPROOTED: A Study of the Human Machine. by Margaret Read. Longmans Green and Co., Ltd., Calcutta. Price 6s. Pp. 256.

The Hon'ble J. H. Whitley, the Chairman of the Royal Commission on Indian Labour, used no words of exaggeration when in his Foreword to Miss Margaret Read's book the "Indian Peasant Uprooted" he referred to it as "a remarkable achievement."

The book is not a mere paraphrase of the Report and the eighteen formidable volumes of the evidence, which a hasty reader may consider it to be. It is far greater than that. The author has succeeded in presenting the entire field of Indian Labour with its complex and growing problem as reviewed by the Royal Commission with masterly accuracy, clarity and brevity and has thus rendered a great service to the general reader and to the cause of Labourer in particular. There would be comparatively few who would set themselves the voluntary task of going through the pages of the main Report, and still fewer who would face the study of 18 large volumes of the Evidence. The alternative is the "Indian Peasant Uprooted," a neat and handy volume, which once taken up cannot readily be put down unless one has read it to the end!

But more than portraying with faithfulness the condition of Indian Industry and Labour as revealed to the Royal Commission, Miss Read's own great contribution has been that she has in a poignant and penetrating manner driven home to our hearts the crying

appeal to the millions of India's labouring men, women and children. "Give me the right to work without paying bribes," "Give us a clean **busti** to live in, away from so bad smell," "Deliver us from debt so that we may live better," are the cries that rise up from our industrial centres and mining areas. In graphic personal illustrations she has by simple skill and true sympathy shown the wretchedness of lives of the people who were in our mines, factories and plantations. These sketches are strewn across the pages of this arresting book, but probably none is more pathetic than the story of Sonoo on Pay-day given in Chapter VIII.

While she touches the hard facts of labour in Indian industry with tender sympathy, yet she is not forgetful of the difficult and stubborn facts of the general poverty, backwardness, inexperience and weakness of the Indian industrial situation. She recognises that many of the existing evils cannot at once be eradicated. Yet in action is not her remedy. She clearly sees possibilities of the mass of Indian workmen being surveyed in no distant future by the ideas of Soviet Russian Communism. Such ideas as these cannot be kept out of India or any other country any longer. She feels that the situation can be saved by concerted action from the side of the Employer, the Government, the worker and the general public. The share of public opinion she suggests is not an insignificant one. In this regard she feels that philanthropic and religious bodies and universities in particular can render great services. Her own book is destined, one hopes, to be an important cause in stimulating public attention to these great problems, and harness public good-will and effort to the amelioration of the working man and woman in India.

S. K. R.

## BOOKS RECEIVED

- PRINCIPLES AND METHODS OF FINANCIAL RECONSTRUCTION WORK  
League of Nations. Pp. 71.
- FARM ACCOUNTS IN THE PUNJAB. 1926-27, by H. R. Stewart. The  
Board of Economic Inquiry. Lahore. Pp. 87. Price As. 8.
- INTERNATIONAL INDUSTRIAL AGREEMENTS. League of Nations. Pp. 39.
- REVIEW OF THE ECONOMIC ASPECTS OF SEVERAL INTERNATIONAL INDUS-  
TRIAL AGREEMENTS, by M. Antonio St. Benni, M. Clemens Lam-  
mers, M. Louis Marlio, and M. Aloys Meyer. League of Nations.  
Price 2s. 6d. \$ 0.60. Pp. 75.
- TRAVANCORE: BANKING ENQUIRY COMMITTEE REPORT. 1930. Vols. I  
and II.
- THE SWADESHI BHAGTA: An Anglo Hindi Monthly Devoted to the  
Promotion of Swadeshi. Vol. I. No. 1. June 1931. Annual Sub-  
scription Rs. 2. Single Copy As. 3. Pp. 18.
- INDIAN COTTON REVIEW FOR THE SEASON 1930-31. Chunilal Mehta and  
Co., Bombay. Pp. 37.
- THE ANNUAL ADMINISTRATION REPORT OF THE AUNDH STATE FOR THE  
YEAR 1929-30. Pp. 60. Appendices I to XXXI.
- THE JOURNAL OF THE TRICHINOPOLY DISTRICT AGRICULTURAL ASSOCIA-  
TION. Vol. III. No. 1. January 1932. (Published Quarterly).
- THE HYDERABAD RAILWAY PURCHASE: An Economist's Review.  
Pp. 22.
- REPORT ON CO-OPERATIVE SOCIETIES IN MYSORE FOR THE YEAR 1929-30.  
PENIEL. Vol. I. No. 2. January 1932. New York. Annual Sub-  
scription \$ 1.50. Single Copy 50 Cents. (Issues Quarterly).
- A NOTE ON SALES OF LAND BETWEEN THE NOTIFIED AGRICULTURAL  
TRIBES IN THE PUNJAB DURING THE QUINQUENNIAL 1922-23 to  
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